THE BRYOCORINAE OF PAPUA NEW GUINEA (HEMIPTERA, MIRIDAE)

(With 200 text-figures)

JOSÉ C. M. CARVALHO (1) Museu Nacional - Rio de Janeiro

This paper is a follow up of the study being undertaken with the Miridae of Papua New Guinea based on collections assembled by the Bernice P. Bishop Museum, Honolulu, Hawaii.

The author wishes to present thanks to Doctors J. L. Gressitt, Wayne C. Gagné and G. M. Nishida who arranged for this work.

Illustrations in the text were prepared by Luiz Antonio Alves Costa, Paulo Roberto Nascimento and Paulo Wallerstein under the author's supervision.

Types are deposited in the Entomological Collection of the B. P. Bishop Museum and paratypes may be found also in the author's collection.

Bryocorinae Baerensprung, 1860

Bryocorides Baerensprung, Rep. Berl. Ent. 4:13.

Miridae with a single-celled membrane or when this is not the case with distally dilated tarsi, elongate guard setae, pulvilli on the inner claw surface and usually with pulvillar combs, parempodia setiform (as a pair of straight hairs).

The subfamily has the majority of species distributed on equatorial and tropical areas of the world. Most forms feed on thick leaves plants such as Bromeliaceae, Orchidaceae, Araceae and Esterculiaceae.

Type genus of the family: Bryocoris Fallen, 1829.

Key to Tribes

1. First segment of antennae incrassate, equal in lenght

to half the width of vertex, about as long as wide (fig. 1); species usually of large size, with coarsely punctate pronotum and noticeably inflated scutellum Odoniellini Reuter, 1910 First antennal segment longer than half the width of vertex or if not, then distinctly narrower than long, pronotum smooth and shining, scutellum never 2. Large, long and slender species with smooth and shining body; pronotum strongly constricted anteriorly; head with a distinct neck; rostrum reaching apex of anterior coxae or so; second antennal segment about three times as long as first Monaloniini Reuter, 1892 Medium to small size species with pronotum usually punctured or if smooth and constricted and head

with a neck, then second antennal segment about as long as first, rostrum reaching middle coxae or beyond Bryocorini Baerensprung, 1860

List of Papua New Guinea Bryocorinae

Odoniellini:

- 1. Parabryocoropsis typicus China & Carvalho, 1951
- 2. Pseudodoniella pacifica China & Carvalho, 1951
 - = Pseudodoniella cheesmannae (China & Carvalho, 1951)
 - = Pseudodoniella dunni (China & Carvalho, 1951)
 - .= Pseudodoniella laensis Miller, 1967
 - = Pseudodoniella szentivanyi Miller, 1957

Monaloniini:

- 1. Helopeltis clavifer (Walker, 1871)
- = Helopeltis niger Walker, 1873
- = Helopeltis braconiformis Walker, 1873
- 2. Mansoniella minuta n.sp.
- 3. Pachypeltis annulipes Poppius, 1912
- 4. Pachypeltis marginalis Poppius, 1912
- 5. Ragwelellus (Narinellus) festivus (Miller, 1954)
- 6. Ragwelellus (N.) horvathi (Poppius, 1912)
- 7. Ragwelellus (N.) luteonotatus n.sp.
- 8. Ragwelellus (N.) magnificus n.sp.
- 9. Ragwelellus (N.) morobensis n.sp.
- 10. Ragwelellus (N.) nigrus n.sp.
- 11. Ragwelellus (N.) similis n.sp.
- 12. Ragwelellus (N.) wauensis n.sp.

Bryocorini:

- 1. Ambunticoris ochraceus n.sp.
- 2. Ambunticoris nigroemboliatus n.sp.
- 3. Bromeliaemiris fasciatus (Ghauri, 1975)
- 4. Bromeliaemiris morobensis n.sp.
- 5. Bromeliaemiris gressitti n.sp.
- 6. Bromeliaemiris rubrinus n.sp.
- 7. Bryocorellisca novaguineae n.sp.
- 8. Bryocorellisca pallidoemboliata n.sp.
- 9. Bryocorellisca pilosa n.sp.
- 10. Carinimiris lustrosus n.sp.
- 11. Crassiembolius nigrus n.sp.
- 12. Crassiembolius semipallidus n.sp.
- 13. Cuneomiris elongatus n.sp.
- 14. Felisacus magnificus Distant, 1904
- 15. Felisacus minutus n.sp.
- 16. Felisacus nigrescens n.sp.
- 17. Felisacus nigricornis Poppius, 1912
- 18. Felisacus ochraceus Usinger, 1946
- 19. Frontimiris fossatus n.sp.

⁽¹⁾ Research Fellow of the "Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq)".

- 20. Frontimiris nigrifrons n.sp.
- 21. Frontimiris obtusifrons n.sp.
- 22. Harpedona marginata Distant, 1904
- 23. Harpedona plana Poppius, 1912 = Harpedona similis (Poppius, 1912)
- 24. Harpedona verticicolor n.sp.
- 25. Hekista albicollaris n.sp.
- 26. Hekista papuensis n.sp.
- 27. Hekista similaris n.sp.
- 28. Hemisphaerocoris puncticollis Poppius, 1912
- 29. Monalocoris nigrus n.sp.
- 30. Monalocoris pallipes n.sp.
- 31. Nabirecoris minutus n.sp.
- 32. Palaeofurius cyclopensis n.sp.
- 33. Palaeofurius nigroemboliatus n.sp.
- 34. Palaeofurius sagittatus Poppius, 1912
- 35. Prodromopsis oculatus Poppius, 1912
- 36. Prodromopsis nigrus n.sp.
- 37. Stenopterocorisca viridis n.sp.
- 38. Taricoris gressitti n.sp.
- 39. Taricoris wauensis n.sp.
- 40. Thaumastomiris discoidalis Poppius, 1912

Odoniellini Reuter, 1910

Odoniellaria Reuter, Acta Soc. Sci. Fenn. 37(3):123.

This tribe comprises a group of genera with very short first antennal segment which is usually incrassate, equal in length to half the width of vertex, about as long as wide, most species are of large size, compact, with coarsely punctured pronotum and strongly inflated (cystiform) scutellum.

Type genus of tribe: Odoniella Haglund, 1895

Most species of the tribe are pests of cacao and of economical importance. The tribe comprises bizarre forms mostly with dull color. Some African species have the antennae longer than half the width of vertex and the scutellum not cystiform, in this case the membrane has auxiliary veins or the head has three pointed tubercles anteriorly.

Key to Genera

 Body less elongate, being only about twice as long as wide; scutellum much shorter and globose (shorter than its width at base which is more or less rounded), not visibly marginate apically; abdominal connexiva more prominent; cuneus much shorter in relation to width at base; posterior tibiae straight, thicker and feebly nodular

Body more elongate, more than twice as long as wide; scutellum longer than its width at base which is straight, visibly marginate apically; abdominal connexiva less prominent; cuneus longer in relation to width at base; posterior tibiae distinctly curved and minutely tuberculate.....

Each genus is represented in Papua New Guinea by a single species.

Parabryocoropsis China & Carvalho, 1951

Parabryocoropsis China & Carvalho, Bul. Ent. Res. 42(2):468; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:147, 1957; id. Miller, Bul. Ent. Res. 48(4):57, 1957.

Characterized by the deep puncturation and shinning tubercular swellings of pronotum and scutellum, the latter strongly inflated and rounded, connexivum of hemelytra exposed.

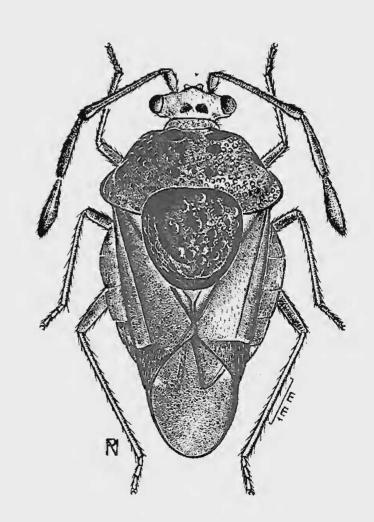
Body compact, head much wider than long, eyes slightly exserted, neck short, clypeus produced with a median depression, frons with two lateral blunt points forming a V-shape. Segment I of antenna very short, twice as long as wide, segment II increassate towards the apex, segment III also slightly incrassate to apex, segment IV club-shaped; rostrum reaching the middle coxae.

Pronotum strongly declivous towards head, coarsely punctured and provided with tubercular, irregular, shining swellings, hind margin covered in middle by scutellum which is strongly inflated, covering clavus laterally, provided with stiff spine-like setae.

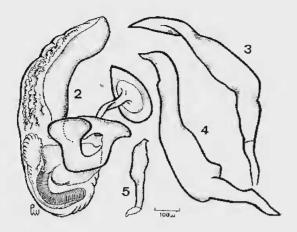
Hemelytra covered by short pilosity, cuneus with acute apex, about twice as long as wide at base.

Type species of genus: Parabryocoropsis typicus China & Carvalho, 1951.

Differs from *Distantiella* China, 1944 by the apically rounded scutellum. Differs also from *Bryocoropsis* Schumacher, 1917 by the presence of irregular marked tubercular swellings of the pronotum and scutellum, the latter being strongly inflated.



Parabryocoropsis typicus China & Carvalho — Fig. 1: male, paratype.



Parabryocoropsis typicus China & Carvalho — Fig. 2: penis; figs.: 3,4: left paramere; fig. 5: right paramere.

Parabryocoropis typicus China & Carvalho, 1951 (Figs. 1-5)

Parabryocoropsis typicus China & Carvalho, Bul. Ent. Res. 42(2):468; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:147, 1957; id. Miller, Bul. Ent. Res. 48(4):57, 1957.

Characterized by the coloration of the body and by the structure of the male genitalia.

Male: Length 7.4 mm, width 2.9 mm. Head: Length 0.6 mm, width 1.6 mm, vertex 1.00 mm. Antenna: Segment I, length 0.3 mm; II, 1.9 mm; III, 1.3 mm; IV, 1.0 mm. Pronotum: Length 2.3 mm, width at base 3.6 mm. Cuneus: Length 1.00 mm, width at base 0.52 mm.

General coloration dark testaceous; head and antennae lighter, the fourth segment darker than others, calli and scutellum in some specimens with dark, shining tubercles, cuneus brilliant metallic black, apex and small membranal area pallid, membrane dark. Underside of body testaceous, the sternum and abdomen lighter in the middle.

Genitalia: Penis (fig. 2) with a flattened theca and membranous lobes. Left paramere (figs. 3-4) slightly curved, wider sub-basally. Right paramere (fig. 5) elongated, enlarged near apex, ending in a blunt point.

Female: Lenght 8.4 mm, width 3.4 mm. Head: Lenght 0.6 mm, width 1.8 mm, vertex 1.08 mm. Antenna: Segment I, length 0.3 mm; II, 2.0 mm; III, 1.2 mm; IV, 1.0 mm. Pronotum: Length 2.2 mm, width at base 4.0 mm. Cuneus: Lenght 1.20 mm, width at base 0.68 mm.

Host plant: Cacao.

Geographical distribution: New Britain, Papua New Guinea.

Specimens studied: NEW BRITAIN: Varzin Pl'n, Gazelle Pen., V.17. 1956, J. L. Gressitt; Keravat, 30 m, IV.3.1956, J. L. Gressitt; id. XI.1960, G. S. Dunn, on Cacao; PAPUA NEW GUINEA: Bubia PTN, 3.X.56, on Cacao, J. H. Ardley; Mamui State, C. Distr. Papua, 19.XI.63, J. J. Szent-Ivany & E. Kanjiri. A total of 25 males and females were at hand and are to be found at the B. P. Bishop Museum, Honolulu, Hawaii.

Pseudodoniella China & Carvalho, 1951

Pseudodoniella China & Carvalho, Bul. Ent. Res. 42(2):465; id. Miller, Bul. Ent. Res. 48(4):57, 1957.

Characterized by the strongly inflated scutellum and by the hemelytra partially covering the connexiva.

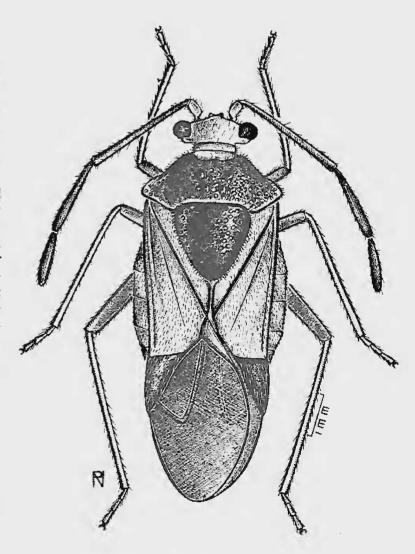
General shape elongate, with pronotum strongly declivous in front, the scutellum prominent. Head twice as broad as long, with a short neck, frons with a central tubercle with two apical blunt points not reaching the anterior margin of first antennal segment, eyes exserted, slightly pedunculate. Antenna with segment I very short, as long as wide, with a few setae on internal side; segment II incrassate towards apex, with a few hairs and setae; segment III irregularly incrassate towards apex; segment IV club-shaped; rostrum reaching apex of middle coxae.

Pronotum strongly punctured and declivous in front, disc covered posteriorly by scutellum which is very prominent, strongly punctured, the apex blunt, provided with short, erect spine-like bristles.

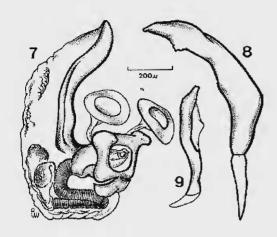
Hemelytra densely and finely pubescent, connexivum partially exposed, cuneus about twice as long as wide at base.

Type species of genus: *Pseudodoniella pacifica* China & Carvalho, 1951.

This genus approaches *Odoniella* Haglund, 1895, *Volkelius* Distant, 1904 and *Rhopalisceschatus* Reuter, 1893 but is readily differentiated by the frontal tubercle and by the shape of the scutellum.



Pseudodoniella pacifica China & Carvalho - Fig. 6: male, paratype.



Pseudodoniella pacifica China & Carvalho - Fig. 7: penis; fig. 8: left paramere; fig. 9: right paramere.

Pseudodoniella pacifica China & Carvalho, 1951 (Figs. 6-9)

Pseudodoniella pacifica China & Carvalho, Bul. Ent. Res. 42(2):467; id. Miller, Bul. Ent. Res. 48(4):57, 1957.

Parabryocoropsis cheesmannae China & Carvalho, Bul. Ent. Res. 42(2):469, 1951 (n.syn.).

Parabryocoropsis dunni China & Carvalho, 1951, Bul. Ent. Res. 42(2):471, 1951 (n.syn.).

Pseudodoniella laensis Miller, Bul. Ent. Res. 48(4): 57, 1957 (n.syn.).

Pseudodoniella szentivanyi Miller, Bul. Ent. Res. 48(4):57, 1957 (n.syn.).

Characterized by the size of the body and by the structure of the male genitalia. Coloration very variable.

Male: Length 8.3 mm, width 2.8 mm. Head: Length 0.6 mm, width 1.7 mm, vertex 1.04 mm. Antenna: Segment I, length 0.4 mm; II, 2.4 mm; III, 1.7 mm; IV, broken. Pronotum: Length 1.8 mm, width at base 3.0 mm. Cuneus: Length 1.20 mm, width at base 0.64 mm.

General coloration very variable. Holotype brick reddish with dark membrane; antennae infuscate towards the apex, eyes dark chestnut, head and pronotum lighter, almost luteous, apex (female) and apical half and lateral margins of scutellum (male) black, cuneus reddish, membrane dark (except base), nervures dark with reddish tinge, tibiae yellow on apical half, esternal region vellow with mesosternum black, abdomen dark with a greenish tinge on the margins and first segment.

According MILLER (1957) the specimens studied by him presented the following coloration: basal segment of antenna yellow, remaining segments brown; segment II with a faint yellowish suffusion basally. Head and thorax, except scutellum, yellow, the head pale. Posterior lobe of pronotum with a posterior irregular black spot of vaiable extent; scutellum black. Corium vellow; cuneus piceous; membrane infumate. Abdomen ventrally whitish yellow. Legs pale yellow, posterior femora suffused with piceous basally (laensis).

Posterior lobe of scutellum with a suffused brown spot medially; scutellum black. Corium yellow; cuneus reddish vellow with apical margin piceous; membrane infumate. Abdomen whitish, connexiva narrowly piceous laterally; segments V-VII suffused with piceous. Anterior legs yellowish, femora suffused with piceous; median and posterior legs with femora piceous, tibiae pale yellow with basal half piceous. The color of pronotum and corium varies to some extent. The former may be entirely yellow or almost entirely suffused with piceous or brown and the latter suffused with brown (szentivanyi).

Genitalia: Penis (fig. 7) with a flattened theca and membranous lobes. Left paramere (fig. 8) curved, pointed apically, with sclerotized tubercles on subapical surface. Right paramere (fig. 9) elongate, pointed apically, with minute sclerotized tubercles.

Female: Similar to male in general aspect, larger in size and very variable in coloration. Length 10.4 mm, width 3.7 mm, vertex 1.24 mm. Pronotum: Lenght 2.3 mm, width at base 4.1 mm. Cuneus: Length 1.72 mm, width at base 0.80 mm.

Host plant: Cacao, Ficus pungens.

Geographical distribution: New Britain, Papua New Guinea.

Specimens studied: 203 males and females, NEW BRITAIN: Keravat, 3.11.56, J. H. Ardley; Lowl. Agr. Exp. Sta. Keravat, XI.1960, G. S. Dunn; PAPUA NEW GUINEA: Morobe Dist. 13.XII.59, on Ficus pungens, J. H. Ardley; Leiwomba PTN, 28,X1.56, Mr. Jim; Tobara, PTN, G. S. Dunn; Magafin Village, PTN, near Dagua, Sepik Dist. 7-8.IV.1964, J. J. Szentivany & P. Thamsen; Amele Village PTN, Madang Dist. 29.V1.59, J. J. Szentivany & J. Healy (Cacao); Bubia Lae N. G. 29.IV.57, J. H. Ardley; Tobom Plant, 19.V.52, G. S. Dunn; Neth. Vogelkop, Fak-Fak. S. coast of Bomberai, 10-100 m, VI.11.59, T. C. Maa; Wau, 1200 m, 14 mar. 1966, Gressitt & Wilkes (light trap); W. Highlands, Baiyer R. 1150 m, X.17.58, J. L. Gressitt; Wau, 1200 m, 14.XII.35, Ficus, J. & M. Sedlacek; Carberry PTN, Popondella, Papua, 13.III.62, A. Catley.

MILLER (1957) pointed out correctly that Parabryocoropsis cheesmannae China & Carvalho and Parabryocoropsis dunni China & Carvalho should be transferred to Pseudodoniella China & Carvalho.

Recently (May, 1977) the senior author had the opportunity to study the types in the British Museum of Natural History, London. Types of Pseudodoniella laensis Miller and Pseudodoniella szentivanyi Miller were also checked. A careful study of the types and also a long series from Papua New Guinea has revealed that this species shows a fairly wide range of color, which will include laensis, szentivanyi and dunni as synonyms of pacifica China & Carvalho. The genus Pseudodoniella as well as Parabryocoropsis thus remain with a single species. The author feel no reason to give names for the side range of color variation in pacifica.

Monaloniini Reuter, 1892

Monaloniaria Reuter, Ann. Soc. Ent. Fr. 61:398; id. Reuter, Acta Soc. Sci. Fenn. 37(3):123, 1920; Monaloniini Carvalho, Arq. Mus. Nac. R. Jan. 44:131, 1957.

As pointed out in the key for tribes, the Monaloniini are usually large and shining species with smooth, elongate body, pronotum strongly constricted anteriorly, head with a distinct neck, rostrum short, second antennal segment about three times or more as long as first (in the majority of species).

Type genus of tribe: Monalonion Herrich-Schaeffer,

1850.

Several species feed on leaves of cacao, cinchona and tea, reasom why they are of considerable economic importance. Most genera are endemic to equatorial or tropical regions. able economic importance since species attack cocoa, tea and cinchona, being well distributed over tropical and equatorial areas of the Oriental and Ethiopic Regions.

Key to Genera

1. Scutellum with a single, very long and slender projection ending in a button-like knob . Helopeltis Signoret, 1858 Scutellum without a projection as above 2 2. Embolio-corial and clavo-corial sutures without punctures; pronotum and hemelytra glabrous 3 Embolio-corial and clavo-corial sutures with a row of close set punctures (on high magnification); pronotum and hemelytra pubescent 4 3. Femora distinctly bow-shaped in the middle; pygophore with a swollen projection or a conical swelling Femora linear, at most weakely curved in the middle or curved only at base; pygophore without a swollen Ragwelellus (Narinellus) Odhiambo, 1965 4. Pronotum glabrous; hemelytra translucid

Helopeltis Signoret, 1858

Helopeltis Signoret, Ann. Jour. Soc. Ent. Fr. (3)6: 502; id. Atkinson, Ind. Econ. Ent. 1(4):175, 1890; id. Distant, Faun. Brit. Ind. Rhyn. 2:439, 1904; id. Mann, Mem. Dept. Agr. Pusa, Ent. 1(4):278, 1907; id. Poppius, Acta Soc. Sci. Fenn. 41(3):176, 1912; id. Ghesquiere, Rev. Zool. Bot. Afr. 10(3):281, 1922 (monograph); id. Carvalho, Arg. Mus. Nac. R. Jan. 44:133, 1957.

Aspicellus Costa, Ann. Mus. Zool. Nap. 2:147, 1865.

Species usually of large size, body elongate, shining, pratically glabrous. Head about as long as wide, with a distinct neck, vertex slightly sulcate, eyes placed at middle of head, prominent, hemispherical; rostrum short, reaching the hind margin of metasternum; antennalong and slender with segment I distinctly clavate apically (subgenus *Helopeltis* Signoret), segments II-IV long and slender, with hairs as long as or longer than thickeness of segments.

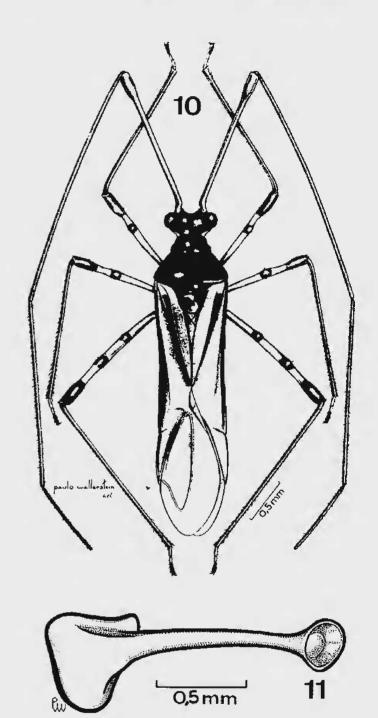
Pronotum smooth, constricted anteriorly, calli not well marked, collar distinct, hind margin of disc straight, humeral angles rounded, lateral margins narrowing towards head; scuttelum small, somewhat rounded, punctured, with a long cylindrical process raised upwards and ending in a mushroon-like knob.

Hemelytra glabrous, narrowed at middle, embolium well marked, cuneus much longer than wide at base, narrowed and curved, membrane long, areola large, apical end of nervure broadly angulous.

Legs very long and slender, femora noticeably nodulose (subgenus *Helopeltis* Signoret).

Type species of genus: Helopeltis antonii Signoret, 1858.

This genus is easily recognized among others of the tribe by the long scutellar raised process. It has consider-



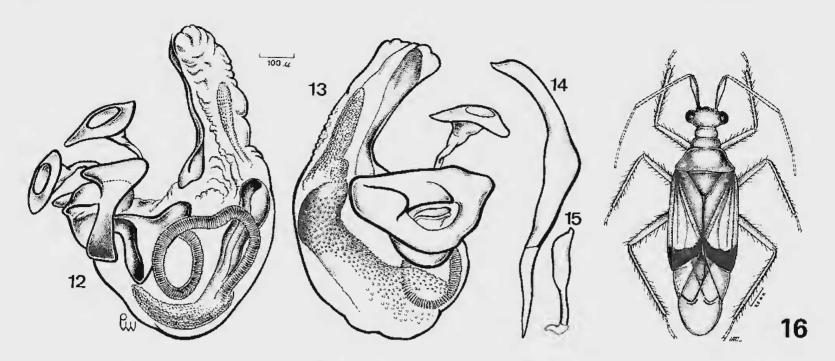
Helopeltis clavifer (Walker) — Fig. 10: male; fig. 11: process of scutellum

Helopeltis clavifer (Walker, 1871) Distant, 1904 (Figs. 10-15)

Dulichius clavifer Walker, Cat. Het. 4:170; Helopeltis clavifer Distant, Ann. Mag. Nat. Hist. (7)13:108, 1904.

Helopeltis braconiformis Walker, Cat. Het. 6:165, 1873; id. Waterhouse, Trans. Ent. Soc. Lond. 4:459, pl. 11, 1886; id. Atkinson, Ind. Econ. Ent. 1(4):177, 1890 (n.syn.).

Helopeltis niger Walker, Cat. Het. 6:165, 1873; id. Waterhouse, Trans. Ent. Soc. Lond. 4:459, pl. 11, fig. 3, 1886; id. Atkinson, Ind. Econ. Ent. 1(4):176, 1890; id. Carvalho, Arg. Mus. Nac. R. Jan. 44:135, 1957 (n.syn.).



Helopeltis clavifer (Walker) — Fig. 12-13: penis; fig. 14: left paramere; fig. 15: right paramere. Mansoniella minuta n.sp. — Fig. 16: holotype.

Characterized by the whitish spot at base of hemelytra, by the nodulose femora and by the structure of the male genitalia.

40

Male: Lenght 6.8 mm, width 1.6 mm. Head: Length 0.5 mm, width 1.0 mm, vertex 0.60 mm. Antenna: Segment I, length 2.9 mm; II, 4.8 mm; III, 3.0 mm; IV, broken. Pronotum: Length 1.2 mm, width at base 1.4 mm. Cuneus: Length 1.04 mm, width at base 0.28 mm.

General coloration black with brown and pale areas; head, pronotum and scutellum shining black, scutellar spine brown; hemelytra dark brown to black, embolium darker, membrane fuscous; a spot laterally on neck, extreme base of hemelytra and a spot at middle of abdomen ventrally, a ring at base of femora, apex of clypeus and a spot on gena pale yellow to whitihs; femora brownish with dark nodules, tibiae pale only apically.

Eyes exserted, scutellar spine long and slender (fig. 11), segment I of antenna enlarged at apex, rostrum reaching between II and III coxae, femora with nodules (first and second pairs with only two and hind pair with three).

Genitalia: Vesica of aedeagus (figs. 12-13) with a characteristic secondary gonopore and two fields of sclerotized spines. Left paramere (fig. 14) elongate, slightly enlarged at middle. Right paramere (fig. 15) small and simple.

Female: Similar to male in general coloration and aspect. Length 8.2 mm, width 2.0 mm. Pronotum: Length 1.4 mm, width at base 2.0 mm. Cuneus: Length 1.52 mm, width at base 0.32 mm.

Host plant: Tea, Cinchona.

Geographical distribution: Papua New Guinea, New Britain, New Ireland.

Specimens studied: The Walker types of Dulichius clavifer Walker, var. B (typus), 59.58 Dory, New Guinea, male and female are to be found in the British Museum of Natural History, London. The two species: Helopeltis braconiformis Walker (typus), Aon, Dory, Wallace and Helopeltis niger Walker, male (typus), Saunder's 65-13,

Wag, are also in the Collection of the British Museum (BMNH). The specimens are black with two whitish spots behind eyes, pronotum and scutellum reddish lutescent, extreme base of hemelytra whitish. In *clavifer* the collar is partially black, in *niger* the specimen is black with only extreme base of hemelytra whitish.

The numerous specimens on hand from Papua New Guinea and neighbouring Islands show substantial variation of color, except for the whitish spots behind eyes and base of hemelytra. PAPUA NEW GUINEA: NE, Kilolo Creek nr.Wau, 900 m, 30.VI.1968, N. L. H. Kraus; Finisterre Range Saidor, Siborg Vill., VI.6-16.58, W. W. Brandt; Torriceli Mts. Sugoitei Vill. 900 m, 1.24-2.V,59, W. W. Brandt; Wantipi Vill. XI.30-XII.8.58; id. Central Dist. Tapini, 800-1000 m, XI.68, N. L. H. Kraus; Wau, Kunai Creek, 1270 m, 22.VIII.63; (Papua) Bisianumu, E. of Port Moresby, 500 m, Sept. 22.55, J. Gressitt; Eliptamin Valley, 1200-1300 m, Aug. 1-15,59; Vogelkop, Kebar Val. W of Manokwari, 550 m, 4-31.1.62, S. Quate & L. Quate; Middle Fly River, 250-300 m, miles up, Jul.-Aug. 28, Pemberton; Swart Val. W side, 1400-2000 m, XI.19.58, J. L. Gressitt; Kar Kar I. Kurum, 0-100 m, VIII.1958, N. L. H. Kraus; Papua, Woodlark I. (Murua), Kulumadau Hill, Jan. 28-30.57, W. W. Brandt; Dreikikir, Sepik Dist. 350 m, 24.VI.61, J. L. & M. Gressitt; Taenga, 1200 m, Upper Jimmi V. Jul. 14,55, J. L. Gressitt; Mt. Hagen area, 1650 m, VI.26.57, D. Elmo Hardy. NEW BRITAIN: Gazelle Pen. Bainings, St. Paul's, 350 m, Sept. 5,55. NEW IRE-LAND: SW Ridge above Camp Bishp, 15 km up Kait R. 250-750 m, VII.13.56, J. L. Gressitt.

Mansoniella Poppius, 1915

Mansoniella Poppius, Phil. Jour. Sci. 10:77; id. Carvalho, An. Acad. Brasil. Ci. 24(1):1952; id. Carvalho, Bol. Mus. Goeldi 11(2):40, 1955; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:137, 1957.

Species with body elongate, shining, pubescent. Head with a distinct neck, globose, wider than long, from rounded, vertex smooth, immarginate; eyes placed

at middle of head, globose, removed from collar by a distance about as long as length of eye; antenna with segment I short, noticeably incrassate apically, about as long as width of vertex, segment II much longer than I, segments III-IV slender, cylindrical; rostrum short, reaching apex of first coxae.

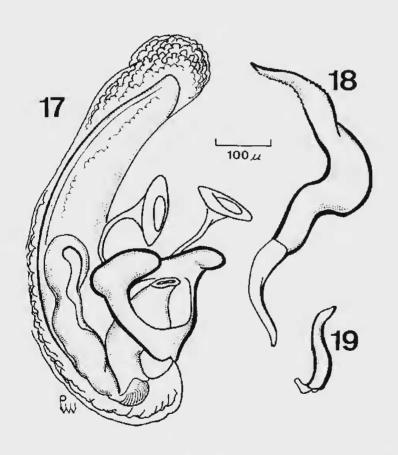
Pronotum strongly narrowed anteriorly, with two constrictions: one between collar and calli and the other between disc and calli, the latter fused, reaching lateral margins, disc smooth, shining, prominent, hind margin slightly convex, humeral angles rounded, lateral margins somewhat sinuate before posterior constriction; mesoscutum exposed, scutellum small, flat, smooth.

Hemelytra narrowed on basal third, embolium flat, explanate, noticeably wider apically, cuneus slightly longer than wide at base, membrane with angulate areola.

Legs long and slender, tibiae with long and erect hairs which are longer than width of segment.

Type species of genus: Mansoniella nitida Poppius, 1915.

Differs from other genera in the tribe by the very short rostrum, by the double constriction of pronotum, by the densely pubescent clavus and by the short first segment of antenna.



Mansoniella minuta n.sp. — Fig. 17; penis; fig. 18; left paramere; fig. 19; right paramere.

Mansoniella minuta n.sp. (Figs. 16-19)

Characterized by the coloration of the body and by the structure of the male genitalia.

Male: Length 5.4 mm, width at base 1.9 mm. Head: Length 0.5 mm, width 0.9 mm, vertex 0.44 mm. Antenna: Segment I, length 0.9 mm; II-IV, broken. Pronotum: Length 1.0 mm, width at base 1.4 mm.

Cuneus: Length 0.80 mm, width at base 0.52 mm (holotype).

General coloration lutescent to ochraceous, translucent, with reddish to pink areas; eyes brown, clavus reddish, claval commissure red, a transverse fascia on apex of corium (widened towards outer margin) and apex of embolium, nervures of membrane bright red; membrane fuscous. Underside of body and legs lutescent.

Rostrum reaching apex of first coxae, first segment of antenna incrassate apically.

Female: Unknown.

Holotype: male, PAPUA NEW GUINEA: NE, Ambunti, Sepik R. 200 m, 9.V.63, R. Straatman, in the Collection of the Bernice P. Bishop Museum, Honolulu, Hawaii.

Differs from *Mansoniella nitida* Poppius, 1915 by the size of the body and by the color of hemelytra.

Pachypeltis Signoret, 1858

Pachypeltis Signoret, Ann. Soc. Ent. Fr. (3)6:501; id. Reuter, Ofv. F. Vet. Soc. Forh. 45(6):3, 1903; id. Carvalho, Arg. Mus. Nac. R. Jan. 44:140, 1957.

Disphinctus Stäl, Ofv. Sv. Akad. Forh. 27:668, 1870; id. Distant, Faun. Brit. Ind. Rhync. 2:443, 1904.

Species of large size with body densely pubescent, elongate, sides parallel. Head with a short neck, wider than long, frons rounded, vertex smooth, immarginate; eyes placed at middle of head, removed from pronotum by a distance approximately equal to the thickness of first antenna at middle: antenna with segment I short, about as long as width of vertex, enlarged at middle, segment II approximately six times longer than I, with long and erect pubescence, the hairs as long as or longer than width of segment, last two segments slender, cylindrical; rostrum very short, reaching apex of first coxae.

Pronotum with two anterior constrictions dividing collar, calli and disc of pronotum, hind margin somewhat bisinuate at middle, humeral angles rounded, lateral margins sinuate before second constriction, smooth, shining; mesoscutum exposed, scutellum flat.

Hemelytra densely pilose, slightly narrowed at basal third, embolium well marked, cuneus about four times as long as wide at base, membrane long, areolar nervure angulous apically.

Legs long and slender, densely pilose, the length of hairs longer than width of segments.

Type species of genus: *Pachypeltis chinensis* Signoret, 1858.

Differs from other genera of the tribe by the unarmed scutellum, by the embolio-corial and clavo-corial sutures with a row of punctures and by the glabrous pronotum. Differs from *Eupachypeltis* Poppius, 1915 by the absence of tubercles on the frons; by the long cuneus and by the body noticeably long and erectly pilose.

Key to Species of Pachypeltis Signoret

1. Head black; cuneus about four times as long as wide at base annulipes Poppius Head lutescent; cuneus less than four times as long as wide at base marginalis Poppius

Pachypeltis annulipes Popplus, 1912 (Fig. 20)

Pachypeltis annulipes Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30): 7; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:140, 1957.

Characterized by the coloration of the body (head black) and by the very long cuneus.

Female: Length 12.0 mm, width 3.1 mm. Head: Length 0.8 mm, width 1.6 mm, vertex 0.46 mm. Antenna: Segment I, length 0.8 mm; II, 5.3 mm; III-IV, broken. Pronotum: Length 2.2 mm, width at base 2.8 mm. Cuneus: Length 2.40 mm, width at base 0.64 mm (holotype).

General coloration dark brown with reddish luteous areas; head black, pronotum and scutellum reddish luteous; antenna black, segment I lutescent at middle; area of gena and gula lutescent; hemelytra cinnamon, clavus and base of corium light cinnamon to lutescent; membrane fuscous with a small reddish spot near cuneal fracture and a similar one situated at meddian outer portion of areola. Underside of body lutescent, abdomen black on upper surface, whitish inferiorly with black spots from V to VIII segments, pygophore black; legs lutescent, base of middle femora, hind coxae, basal portion of hind femora black, the latter with a median pale ring and castaneous to reddish apical portion, hind tibiae fuscous.

Rostrum reaching the anterior coxae, segment I of antenna noticeably incrassate at middle, eyes separated from pronotum by a distance approximately equal to diameter of eye, embolio-corial and clavo-corial sutures with a row of punctures, cuneus about four times as long as wide at base.

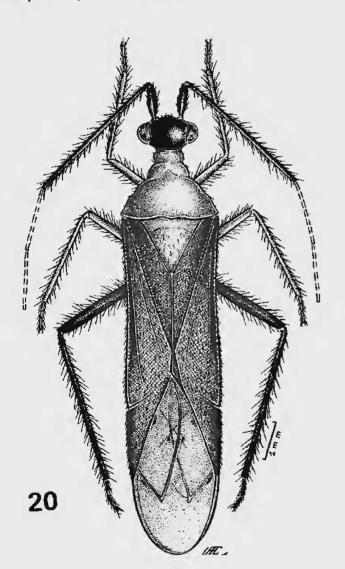
Male: Similar to female in coloration and general aspect.

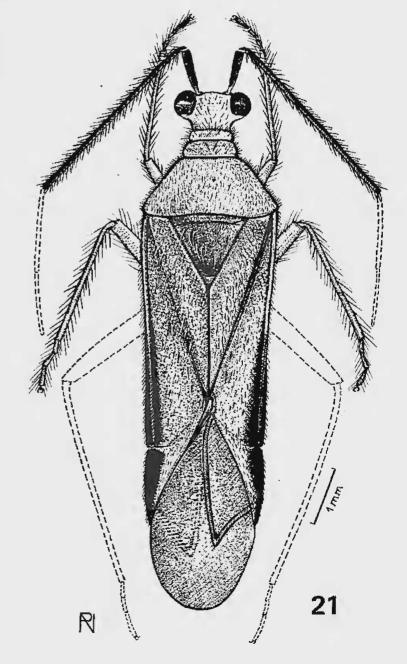
Genitalia: Not illustrated but very similar to that of Pachypeltis marginalis Poppius.

Geographical distribution: Papua New Guinea.

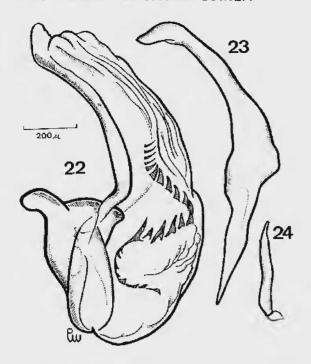
Specimens studied: female, holotype, New Guinea: Huon-Gold, Simbang, 3.11.1899, Biró, Hungarian Museum of Natural History, Budapest.

The only male on hand for study was a teneral specimen. A critical comparison with *marginalis* Poppius could not be made. The holotype however was illustrated. The length of cuneus seems to be a distinctive character of this species.





Pachypeltis annulipes Poppius - Fig. 20: male compared with type. Pachypeltis marginalis Poppius - Fig. 21: male, holotype.



Pachypeltis marginalis Poppius — Fig. 22: penis; fig. 23: left paramere; fig. 24: right paramere.

Pachypeltis marginalis Poppius, 1912 (Figs. 21-24)

Pachypeltis marginalis Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):4; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:151, 1957.

Characterized by the coloration of the body and by the structure of the male genitalia.

Male: Length 8.7 mm, width 2.3 mm. Head: Length 0.6 mm, width 1.2 mm, vertex 0.56 mm. Antenna: Segment I, length 0.7 mm; II, 3.2 mm; III-IV, broken. Pronotum: Length 1.6 mm, width at base 2.3 mm. Cuneus: Length 1.28 mm, width at base 0.60 mm (lectotype).

General coloration dark brown with lutescent and reddish areas or markings; head, pronotum and mesoscutum lutescent; antenna and eye black to dark brown, antennal peduncle lutescent; hemelytra brown, embolium and lateral portion of exocorium black to dark brown; cuneus grown tending to reddish; membrane fuscous.

Underside of body lutescent, hind pleura and abdomen black, segments III-VII with a whitish lutescent spot (extending through ventral portion on segments III-V), hind coxae and legs dark brown to black.

Legs and antennae densely pilose, hairs of hind tibiae longer than width of segment.

Genitalia: Penis (fig. 22) with a characteristic row of sclerotized teeth. Left paramere (fig. 23) curved, wider sub-basally. Right paramere (fig. 24) very slender.

Female: Similar to male in coloration and general aspect. Length 11.0 mm, width 2.6 mm, vertex 0.68 mm. Antenna: Segment I, length 0.8 mm; II, 3.8 mm; III, 2.2 mm; IV, broken. Pronotum: Length 1.9 mm, width 2.9 mm. Cuneus: Length 1.68 mm, width at base 0.76 mm.

Geographical distribution: Papua New Guinea.

Specimens studied: male, lectotype, New Guinea, Hatam, VII, Beccari, 1875, Museo Civ. Genova, Mus. Zool. H:fors, Spec. typ. nº 9807 Pachypeltis marginalis Poppius. One male, paralectotype, same data as lectotype. Males and females: PAPUA NEW GUINEA: NE, Swart Val. Karubaka, 1500 m, XI.20.58 J. L. Gressitt;

Bayer R. 1000 m, 1-4.IX.69, Y. Hirashima; Eliptamin Valley, 1200-1350 m, July 1-15.59, W. W. Brandt; Biak I. nr. Mokmer airstrip, X.19.57.

Differs from *Pachypeltis annulipes* Poppius, by the color of the head and by the length of cuneus.

Ragwelellus Odhiambo, 1962

Eucerocoris (Ragwelellus) Odhiambo, Bul. Brit. Mus. Nat. Hist. Ent. 11(6):314; Ragwelellus Odhiambo, Proc. R. Ent. Soc. Lond. (B) 34(1-2):21, 1965.

Species with noticeably long and slender body, largelly glabrous, smooth. Head wider than long, frons straight anteriorly, vertex smooth, immarginate, neck short; eyes placed near middle of head, globose, small, removed from pronotum by a distance approximately equal to width of eye; antenna very long and slender, segment I about seven times as long as head, enlarged apically, segment II longer than I and about twice as long as III, segment IV short, pubescent, the hairs shorter than width of segments.

Pronotum smooth, shining, constricted anteriorly behind calli, the latter fused medially, reaching lateral margins, collar not well marked, hind margin of disc straight, humeral angles rounded, lateral margins narrowing towards head; mesoscutum partially covered; scutellum flat, shining.

Hemelytra with lateral margins parallel, embolium well defined, cuneus about five times as long as wide at base, narrowed, membrane long, areola elongate, nervures diverging apically.

Legs very long and slender, femora distinctly bow-shaped in the middle, especially the hind pair, apical portion somewhat incrassate, tibiae long, cylindrical. Pygophore of male with a swollen projection or a conical swelling with a sharp point.

Type species of genus: Ragwelellus peregrinus Odhiambo, 1962.

This genus approaches *Helopeltis* Signoret, 1858 in its general fascies but do not have a scutellar projection. ODHIAMBO (1965) proposed its division into two subgenera, based on the structure of the femora and pygophore, as follows:

Femora distinctly bow-shaped in the middle; last abdominal segment in the male with a swollen projection or a conical swelling with a sharp point

species Narinellus thetis (Kirkaldy, 1908)

All species known so far occur in the Pacific and

All species known so far occur in the Pacific and are pests of Cinchona.

Key to Species of Ragwelellus Odhiambo

- 1. Color of body (except eye, antenna, femora and membrane) brick red to orange red or lutescent; femora black on apical half horvathi (Poppius) Color of body not uniformily brick red or orange red as above; femora not black on apical half 2

Scutellum dark brown; disc of pronotum pale irregularly only at anterior portion, without two reddish fascie above festivus (Miller)

5. Pronotum totally black; scutellum dark brown to black with a median longitudinal pale fascia; hemely-tra uniformily brown to cinnamon nigrus n.sp. Pronotum not totally black; scutellum without a median pale longitudinal line; hemelytra with more than one color 6

Ragwelellus (Narinellus) festivus (Miller, 1954) (Figs. 25-28)

Eucerocoris festivus Miller, But. Ent. Res. 45(4): 703, figs.; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:132, 1957.

Characterized by the spot of clavus by the color of

scutellum and by the structure of the male genitalia.

Male: Lenght 7.0 mm, width 1.4 mm. Head: Length 0.5 mm, width 0.9 mm, vertex 0.48 mm. Antenna: Segment I, length 2.7 mm; II, 4.8 mm; III, 2.8 mm; IV, 1.0 mm. Pronotum: Length 0.8 mm, width at base 1.5 mm. Cuneus: Length 1.40 mm, width 0.28 mm.

General coloration shining reddish brown to purple with pale yellow to lutescent areas; head dark brown with a pale median spot, neck red laterally, segment I of antenna reddish to brown, apex always red, base darker, segments II-IV dark brown to castaneous; pronotum dark brown to reddish, disc with a median pale trapezoidal spot reaching or not the hind margin; scutellum dark brown; hemelytra reddish brown to reddish or purple, clavus with a characteristic median pale translucid spot, comissure, sutures, cuneus and nervures reddish, membrane fuscous, embolium narrowly pale yellow (in some specimens the inner posterior portion of corium is pale, translucid). Underside of body lutescent, including lower portion of head, propleura, coxae and legs; femora reddish apically, tibiae pale yellow to brown, apex fuscous, tarsi black.

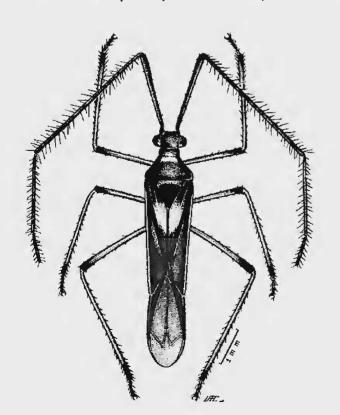
Femora and antenna I incrassated apically, segment II-IV with erect hairs noticeably longer than thickness of segments, hind femora straigth, only slightly curved, rostrum reaching apex of mesoscutum, nervure of membrane with a short apical pointed outgrowth.

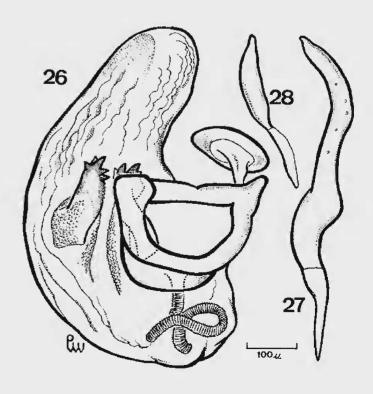
Genitalia: Penis (fig. 26) with two characteristic patches provided with sclerotized spines at each side of secondary gonopore. Left paramere (fig. 27) long, falciform, slightly enlarged sub-basally. Right paramere (fig. 28) small, slender, elongate.

Female: Similar to male in coloration and general aspect. Length 7.9 mm, width 1.7 mm. Segment I of antenna 3.1 mm long. Cuneus length 1.28 mm, width at base 0.36 mm.

Host plant: Cinchona.

Geographical distribution: Papua New Guinea.





Ragwelellus festivus (Miller) - Fig. 25: male; fig. 26: penis; fig. 27: left paramere; fig. 28: right paramere.

Specimens studied: Several males and females: NEW GUINEA: NE, Feramin, 120-150 m, May 23-31.59, W. W. Brandt: NE, Mt. Kaindi, 2300 m. 10.V.68, J. L. Gressitt; NE, Mt, Wilhelm, 3000 m, July 4.55, J. L. Gressitt; Wau, Morobe Dist. 1100-1300 m, 21.111.62, J. Sedlacek; Mt. Otto, 2200 m, June 22.55, J. L. Gressitt; NW, Wisselmeren Enarotadi, 1850-1900 m, 19.VII.62, J. Sedlack; E end Saruwaged Ra, 20 km SSW Kalwum, 2550 m, 5-12.VIII.66, G. A. Samuelson; (Nt) Mt. Otto, 2500 m, June, 21.55, J. L. Gressitt; NE Nenguag, Asaro-Chimbu div. 2500 m, June 29.55, J. L. Gressitt; NE Lake Sirunki, 2550 m, 14.VI.63, J. Sedlacek; Kegesugl 2700 m, 10, VIII.69, J. L. Gressitt; SE Mt. Giluwe 2550 m. 27, V.63, J. Sedlacek; Daulo Pass, 2400 m (Asaro-Chimbu div.), June 15.55, J. L. Gressitt; Papua, Keparra-Sengi, nr. Kokoda, 500 m, 26.111.56, J. L. Gressitt.

Differs from Ragwelellus (N.) magnificus n.sp. by the color of pronotum, scutellum and by the structure of the male genitalia.

Ragwelellus (Narinellus) horvathi (Poppius, 1912) (Figs. 29-32)

Eucerocoris horvathi Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):1; Eucerocoris (Ragwelellus) horvathi: Odhiambo, Bul. Brit. Mus. Nat. Hist. Ent. 11(6):314, 1962; id. Odhiambo, Proc. R. Ent. Soc. Lond. (B) 34 (1-2):21, 1965.

Characterized by the coloration of the body and by the structure of the male genitalia.

Male: Lenght 6.0 mm, width 1.4 mm. Head: Length 0.4 mm, width 1.0 mm, vertex 0.48 mm. Antenna: Segment I, length 3.2 mm; II, 4.4 mm; III, 3.4 mm;

IV, 1.4 mm. *Pronotum:* Length 1.28 mm, width at base 1.4 mm. *Cuneus:* Length 1.28 mm, width at base 0.20 mm.

General coloration reddish to orange or pumpkin with brown to fuscous areas; eyes and antennae brown to black (except extreme base of segment I which is lutescent), membrane fuscous. Underside of body reddish lutescent, remaining portions of legs brown to black, tibiae lighter towards apices, apex of rostrum black.

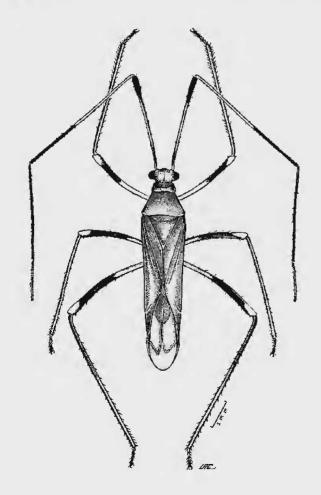
Hind femora noticeably curved, incrassated apically, apex of areola reaching far beyond apex of cuneus, rostrum reaching middle coxae.

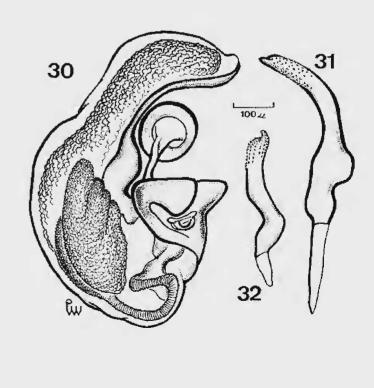
Genitalia: Penis (fig. 30) with two large fields of sclerotized minute teeth on both sides of secondary gonopore. Left paramere (fig. 31) curved, with apical minute tubercles. Right paramere (fig. 32) small, simple.

Female: Similar to male in coloration and general aspect. Length 7.2 mm, width 1.7 mm, vertex 0.60 mm. Host plant: Cardamon.

Specimens studied: Lectotype (new designation), Astrolabe Bai, Stephansort, 27.IV.1901. Paralectotype: Huon-Golf, Simbang, Biró (Mus. Hung. et Mus. Helsingfors). NEW GUINEA: 18 males and females, Neth. Ifar, 400-550 m, June 23,59, T. C. Maa; Busu R. E of Lae, 100 m, Sept. 15,55, J. L. Gressitt; Papua, nr. Port Moresby, Brown R. VI.17,57, D. Elmo Hardy; Hollandia Area W Sentani, Cyclops Mts. 150-250 m, June 17.59, J. L. Gressitt; Waris, S of Hollandia, 450-500 m, VIII.8-15.59, T. C. Maa; Afore, N Dist. Papua, 17 Sept. 37, G. Brery, ex-Cardamon.

Species easily recognizes among others in the genus by the coloration of the body.





Ragwelellus horvathi (Poppius) - Fig. 29: male; fig. 30: penis; fig. 31: left paramere; fig. 32: right paramere.

Ragwelellus (Narinellus) luteonotatus n.sp. (Figs. 33-35)

Characterized by the color of pronotum and scutellum, as well as by the structure of male genitalia.

Female: Length 7.6 mm, width 1.5 mm. Head: Length 0.4 mm, width 1.0 mm, vertex 0.56 mm. Antenna: Segment I, length 3.4 mm; II, 4.8 mm; III-IV, broken. Pronotum: Length 1.2 mm, width at base 1.6 mm. Cuneus: Length 1.60 mm, width at base 0.28 mm (holotype).

General coloration brown with black and lutescent areas; head black, eyes brown, antennae light castaneous, base and apex of segments fuscous to black (in one specimen there are pale spots on both sides of vertex and middle of frons); pronotum shining black, a small streak over collar and a large spot on disc and whole scutellum lutescent; hemelytra brown to cinnamon, area contiguous to corial commissure, cunneus and nervure of membrane light brown, the latter fuscous. Underside of body lutescent, including sides of head, upper surface of

abdomen reddish, apex of rostrum black; legs lutescent, hind femora with a row of dark spots externally, apical portion dark, base of hind tibiae black.

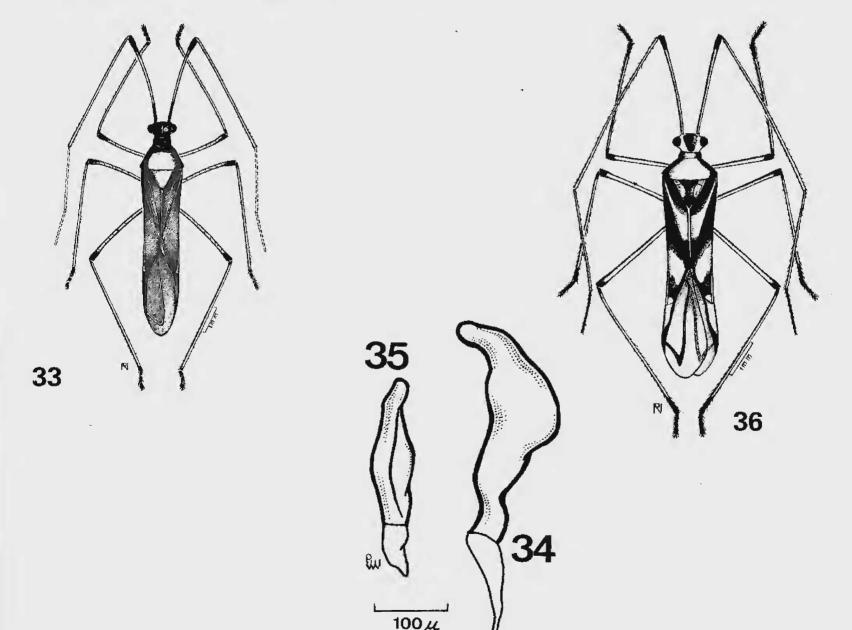
Pubescence of antenna very short, more dense on apical fifth of segment II, rostrum reaching middle coxae; cuneus very long and narrow, about five times as long as wide at base.

Male: Similar to female in coloration and general aspect. Length 7.6 mm, width 1.2 mm.

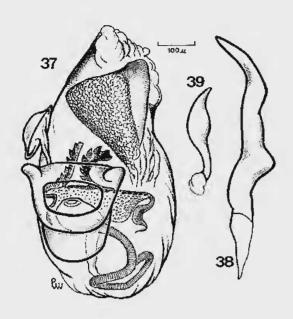
Genitalia: Penis damaged during dissectaion. Left paramere (fig. 34) short, enlarged at middle, rounded apically. Right paramere (fig. 35) small, simple.

Holotype: female, NEW GUINEA: NE, Wau, Morobe District, 1200 m, 19.X.1961, J. Sedlacek, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratypes: male and three females, NE Swart Valley, Karubaka, 1350 m, XI.18.58, J. L. Gressitt; Bulolo River, 1139 m, 17.9.69, J. & M. Sedlacek; Feramin, 150-120 m, May 23-31,59, W. W. Brandt.

Differs from Ragwelellus (N.) festivus (Miller) by the color of clavus and by the structure of male genitalia.



Ragwelellus luteonotatus n.sp. – Fig. 33: holotype; fig. 34: left paramere; fig. 35: right paramere. Ragwelellus magnificus n.sp. – Fig. 36: holotype, male.



Ragwelellus magnificus n.sp. — Fig. 37; penis; fig. 38; left paramere; fig. 39; right paramere.

Ragwelellus (Narinellus) magnificus n.sp. (Figs. 36-39)

Characterized by the color of the scutellum and disc of pronotum as well as by the structure of the male genitalia.

Male: Length 7.2 mm, width 1.4 mm. Head: Length 0.4 mm, width 0.9 mm, vertex 0.44 mm. Antenna: Segment I, length 2.8 mm; II, 4.5 mm; III, 2.7 mm; IV, 0.9 mm. Pronotum: Length 0.9 mm, width at base 1.5 mm. Cuneus: Length 1.96 mm, width at base 0.40 mm (holotype).

General coloration pale yellow to ochraceous, translucid, with reddish and brown areas; head dark brown to reddish with inner margin of eyes and sides of head pale, eyes brown, antenna reddish to ochraceous, in the latter case apex of segment I always red; pronotum with lateral margins widely black anteriorly, humeral angles reddish to castaneous, disc lutescent to reddish lutescent, usually (most specimens) with two longitudinal reddish to orange fasciae (one at each side) reaching hind margin; scutellum lutescent with a characteristic reddish median longitudinal fascia which covers most of apical portion; hemelytra reddish with a pale vellow to ochraceous spot on middle of clavus, a similar subapical one on corium externally and a third one on basal outer portion of cuneus, membrane fuscous, nervure reddish. Underside of body lutescent to citrine, mesosternum reddish; legs ochraceous, apices of femora, apices and bases of tibiae red, apices of tarsi black; upper surface of abdomen reddish.

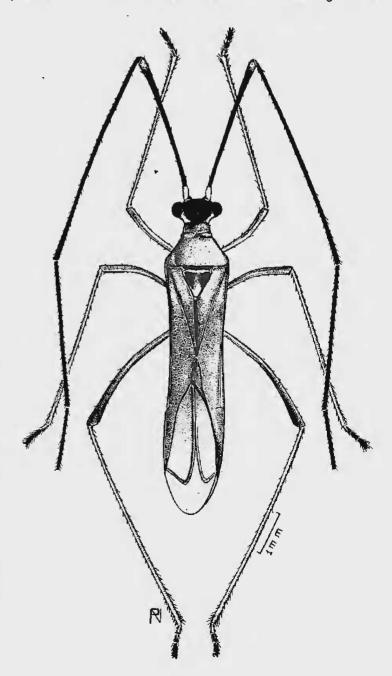
Segments II and III of antenna noticeably pilose, length of hairs slightly longer than thickness of segments; cuneus very long and narrow, curved apically; areolar nervure pointed apically, its apical outgrowth about as long as distance from its apex and distal margin of membrane; rostrum reaching middle coxae; hind femora very weakly curved.

Genitalia: Penis (fig. 37) with two characteristic fields of sclerotized teeth on both sides of secondary gonopore. Left paramere (fig. 38) falciform with a sub-basal lobe. Right paramere (fig. 39) small, slightly enlarged at middle, pointed apically.

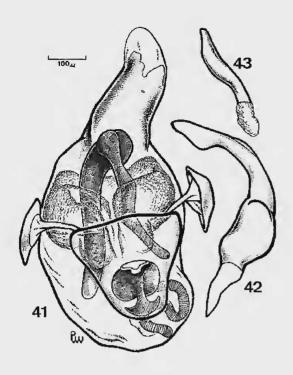
Female: Similar to male in general aspect and coloration, second antennal segment on apical fifth and third and fourth segments totally with hairs as long as thickness of segments plus erect, long and sparse setae noticeably longer than diameter of segment. Length 7.8 mm, width 1.5 mm.

Holotype: male, NEW GUINEA: NE, Mt. Wilhelm, 3000 m, July 4, 1955, J. L. Gressitt, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratypes: five males and eight females, Nenguag, Asaro-Chimbu div. 2500 m, June 29,55, J. L. Gressitt; Mt. Otto, 2500 m, June 21,55; NE Kassam, 1350 m, 48 km E of Kaimantu, X.30,59; NE Keglesugl 2700 m, 11.VIII.69, J. L. Gressitt; NE Daulo Pass 2500 m (Asaro-Chimbu div.), June 12,55, J. L. Gressitt; NW Wau, Morobe Distr. 1100-1300 m, 21.III.62, J. Sedlacek; NE Keglesugl 2500-2400 m, 8-14.VIII.67, Hirashima; NE E end Saruwaged Ra, 20 km SSW Kabulum, 2550 m, 5-12.VII.66, G. A. Samuelson.

Differs from Ragwelellus (N.) festivus (Miller) by the color of disc and scutellum, nervure of membrane, pubescence of antenna and structure of male genitalia.



Ragwelellus morobensis n.sp. - Fig. 40: holotype, male.



Ragwelellus morobensis n.sp. — Fig. 41: penis; fig. 42: left paramere; fig. 43: right paramere.

Ragwelellus (Narinellus) morobensis n.sp. (Figs. 40-43)

Characterized by the coloration of the body and by the structure of the male genitalia.

Male: Length 6.7 mm, width 1.3 mm. Head: Length 0.4 mm, width 1.0 mm, vertex 0.52 mm. Antenna: Segment I, length 3.5 mm; II, 4.7 mm; III, 3.0 mm; IV, 1.2 mm. Pronotum: Length 0.9 mm, width at base 1.3 mm. Cuneus: Length 1.40 mm, width at base 0.24 mm (holotype).

General coloration testaceous to brownish with black and ochraceous areas; head (except neck, clypeus, lateral and inferior portions), antennae (except extreme base of segment I) black; pronotum and base of hemelytra testaceous to ochraceous; scutellum darker, paler on middle line and apex; corium (except outer basal portion), clavus (except basal inner portion) and cuneus fuscous to brown; membrane fuscous, nervure brown, apex paler. Underside of body and legs testaceous to ochraceous, apices of femora darker, tarsi black.

Pubescence of antenna very short, visible on apical fifth of segment II, segments III and IV with short hairs and sparse, long setae; apical outgrowth of nervure of membrane very short; hind femora strongly arched at middle; rostrum reaching middle coxae.

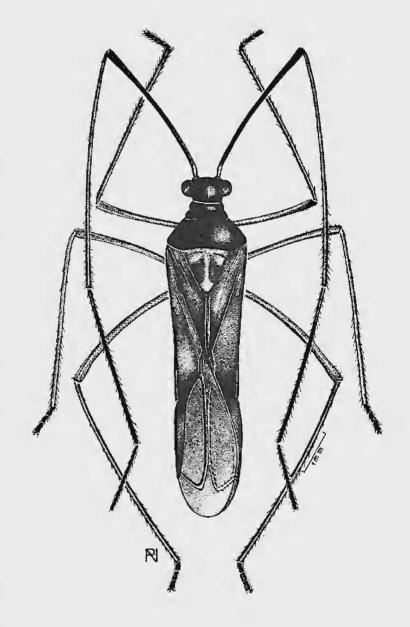
Genitalia: Penis (fig. 41) with a peculiar sclerotized branched formation on vesica and two patches with minute sclerotized teeth on both sides of secondary gonopore. Left paramere (fig. 42) curved, enlarged sub-basally. Right paramere (fig. 43) very small, slender.

Female: Similar to male in general aspect and coloration. Length 7.5 mm, width 1.4 mm, segment II of antenna 5.2 mm, cuneus length 1.72 mm, width at base 0.28 mm.

Holotype: male, NEW GUINEA: NE, Morobe District, Ulap, 800-1000 m, IX.1968, N. L. H. Krauss in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratypes: Papua Owen Stanley Range Goilala, Loloipa, XI.25-XII.10,57; NE Adelbert Mts. Wanuma,

800-1000 m, X.27,58, J. L. Gressitt; Neth. Sentani, 90 m, June 15.59, T. C. Maa; Papua, Daradae Pl'n, 500 m, 80 km N to Port Moresby, IX.4.59, T. C. Maa; NE Feramin, 150-120 m, June, 15,59, W. W. Brandt; NE Morobe Dist. Ulap, 800-1000 m, IX.68, N. L. H. Kraus; NE Karimui, South Goroka, 1000 m, 13.VI.61, J. L. Gressitt; West Newguinea, Bokondiri, 40 km N Balein Val. 1300 m, 16-23.XI.61; Ne Wau, South of Hollandia, 450-500 m, VIII.8.1959; NE Feramin, 150-120 m, May, 23.51, W. W. Brandt; Neth, Ifar, 300-600 m, June 20,59, J. L. Gressitt (8 males, 13 females).

Differs from Ragwelellus (N.) nigrus n.sp. by the color of pronotum and by the structure of male genitalia.



Ragwelellus nigrus n.sp. - Fig. 44: holotype, male.

Ragwelellus (Narinellus) nigrus n.sp. (Figs. 44-47)

Characterized by the color of pronotum and scutellum and by the structure of male genitalia.

Male: Length 6.8 mm, width 1.5 mm. Head: Length 0.4 mm, width 1.1 mm, vertex 0.56 mm. Antenna: Segment I, length 3.2 mm; II, 5.2 mm; III, 3.4 mm; IV, broken. Pronotum: Length 1.0 mm, width at base 1.5 mm. Cuneus: Length 1.40 mm, width at base 0.20 mm (holotype).

General coloration brown to cinnamon with black and ochraceous areas; eyes, head (except clypeus and sides which are pale), antennae (except pale extreme base of segment I), pronotum and scutellum shining black, the latter with a narrow median longitudinal line and extreme apex pale; hemelytra opaque, cinnamon to brown, membrane fuscous, nervure lighter. Underside of body ochraceous to lutescent, coxae and trochanters black, legs ochraceous, hind femora with a line of dark dots, pygophore black.

Pubescence of antenna more noticeably on apical fifth of second segment and whole III and IV segments,

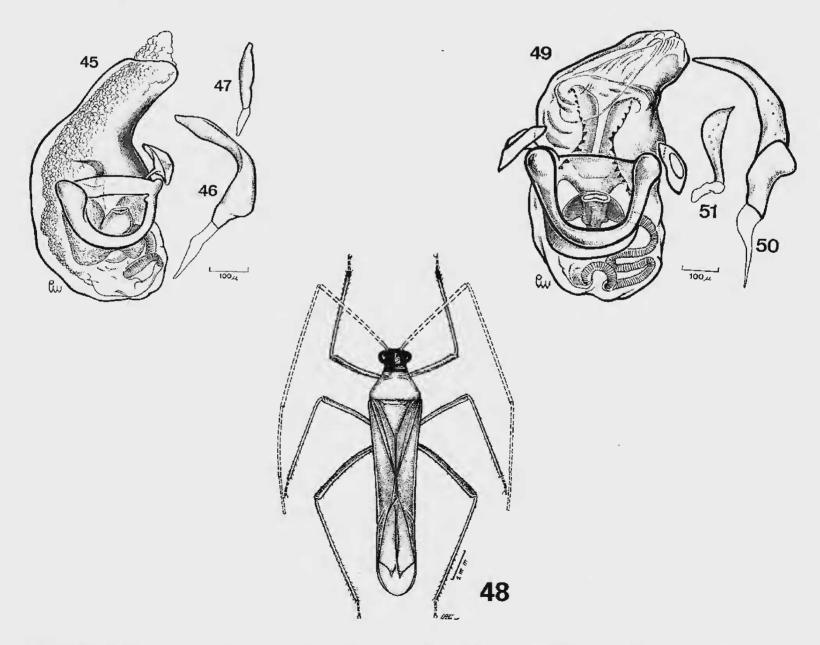
the common hairs shorter than thickness of segments intermixed with sparse, erect setae longer than diameter of segments; hind femora noticeably curved, apical outgrowth of areolar nervure very short, rostrum reaching middle coxae.

Genitalia: Penis (fig. 45) with two patches of sclerotized minute teeth on both sides of secondary gonopore. Left paramere (fig. 46) falciform, laminate apically. Right paramere (fig. 47) very small, simple.

Female: Similar to male in general aspect and coloration. Length 7.9 mm, width 1.7 mm,

Holotype: male, NEW GUINEA: NE Busu R., E of Leae, 100 m, Sept. 13, 1955, J. L. Gressitt, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratypes: four males and five females, same data as type plus Papua, Keparra-Sengi nr Kokoda, 500 m, III.26. 1956, J. L. Gressitt; NE Finisterre Range Saidor, Galumi VIII. VII.1-21, 1958, W. W. Brandt.

Differs from other species in the genus by the black pronotum and scutellum, the latter with a median longitudinal line and extreme apex pale, by the unicolorous, opaque hemelytra and by the structure of the male genitalia.



Ragwelellus nigrus n.sp. — Fig. 45: penis; fig. 46: left paramere; fig. 47: right paramere. Ragwelellus similis n.sp. — Fig. 48: holotype, male; fig. 49: penis; fig. 50: left paramere; fig. 51: rith paramere.

Ragwelellus (Narinellus) similis n.sp. (Figs. 48-51)

Characterized by the color of abdomen and color of hind femur, as well as by the structure of male genitalia.

Male: Length 8.0 mm, width 1.5 mm. Head: Length 0.6 mm, with 1.1 mm, vertex 0.64 mm. Antenna: Segment I, length 2.9 mm; segments II-IV, broken. Pronotum: Length 1.1 mm, width at base 1.5 mm. Cuneus: Length 1.92 mm, width at base 0.32 mm (holotype).

General coloration lutescent to orange lutescent with black and ochraceous areas; head, anterior margin of pronotum (only in some specimens), extreme base of first antennal segment black, antennae castaneous, segment I darkened towards base, gula and rostrum lutescent; pronotum, scutellum and base of hemelytra to level of middle of clavus orange lutescent to lutescent, corium (except outer or whole sub-basal portion wich is ochraceous, translucid) dark brown to fuscous, membrane fuscous with a typical small reddish spot bordering inferior third of nervure and other ones bordering cuneus (one or two or more, irregularly placed). Underside of body lutescent, abdomen black, whitish on ventral surface with a black irregular fascia from III to

VI segments, starting at the upper margin of segment III and running backwards at each side (double) up to segment VI; legs ochraceous lutescent, femora irregularly marked with dark (black at middle in some specimens), tarsi fuscous.

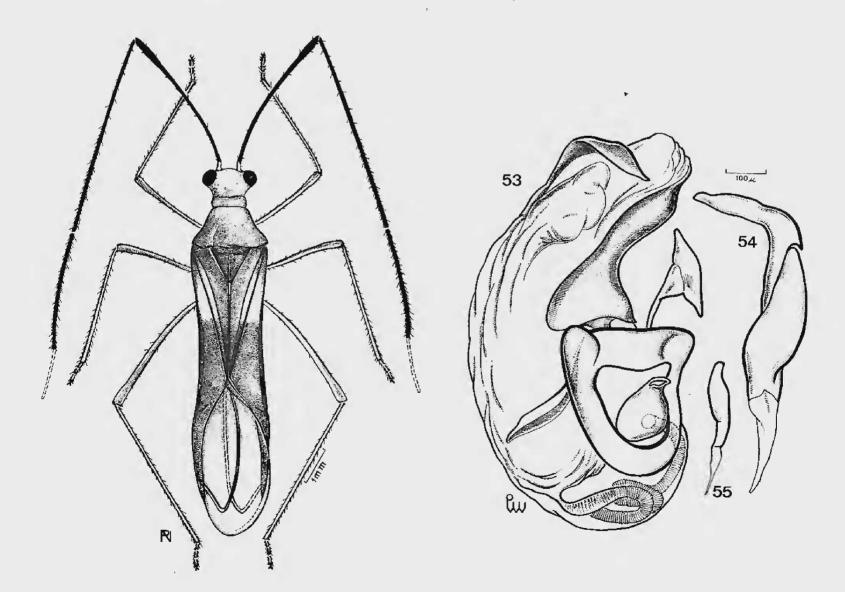
Pubescence of antenna not seen (segments II-IV mutilated), rostrum reaching apex of mesosternum, hind femur moderatly curved.

Genitalia: Penis (fig. 49) with two characteristic rows of sclerotized teeth on both sides of the secondary gonopore. Left paramere (fig. 50) curved, with large basal lobe. Right paramere (fig. 51) small, simple.

Female: Similar to male in general aspect and coloration. Length 8.0 mm, width 1.4 mm. Cuneus: Length 1.48 mm, width at base 0.36 mm.

Holotype: male, NEW GUINEA: Wau, Morobe District, Mt. Missim, 1320 m, 2.II.1963, J. Sedlacek, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratypes: four females, same data as type plus Morobe District, 1200 m, 7.VI.1962; NE Swart Val Karubaka, 1300 m, XI.7.1958, J. L. Gressit; Neth. Biak I. Magrowawa, 50-100 m, V.30.1959, J. L. Gressitt.

Differs from Ragwelellus (N.) morobensis n.sp. by the color of the abdomen, antenna and scutellum, by the less arched hind femur and by the structure of male genitalia.



Ragwelellus wauensis n.sp. - Fig. 52: female, holotype; fig. 53: penis; fig. 54: left paramere; fig. 55: right paramere.

Ragwelellus (Narinellus) wauensis n.sp. (Figs. 52-55)

Characterized by the coloration of body and by the structure of male genitalia.

Male: Length 10.6 mm, width 2.0 mm. Head: Length 0.9 mm, width 1.4 mm, vertex 0.72 mm. Antenna: Segment I, length 4.1 mm; II, 5.0 mm; III, 2.9 mm; IV, broken. Pronotum: Length 1.4 mm, width at base 2.1 mm. Cuneus: Length 1.84 mm, width at base 0.40 mm (paratype).

General coloration lutescent with black and reddish areas; eyes and antennae dark brown, base of segment I lutescent, head lighter with characteristic dark spots at inner side of eye; pronotum and scutellum testaceous lutescent, clavus reddish lutescent, corium, embolium and cuneus castaneous, basal third of corium ochraceous translucid, embolium towards apex, cuneus externally and membrane fuscous, nervure and inner margin of cuneus reddish. Underside of body and legs lutescent, middle of femora and tarsi fuscous.

Pubescence of antenna more visible on apical two thirds of segment II and on segments III-IV, with very short hairs and erect, sparse setae, approximately as long as thickness of segments; rostrum eaching middle coxae, segment II of antenna incrassate apically; femora strongly curved.

Genitalia: Penis (fig. 53) with a characteristic, elongate sclerotized patch on both sides of the secondary gonopore. Left paramere (fig. 54) large, with a typical tooth at subapical portion. Right paramere (fig. 55) very small, simple.

Female: Similar to male in general aspect and coloration. Length 10.7 mm, width 2.0 mm. Cuneus length 2.00 mm, width at base 0.36 mm (holotype).

Holotype: female, NEW GUINEA: NE Wau, 1200-1600 m, 9.II.1968, J. Sedlacek, in the Collection of the Bernice P. Bishop Museum, Honolulu. *Paratype:* male, NE Wau, 1200 m, 3-7.IV, 1964, J. Sedlacek, light trap.

Differs from other species in the genus by the color of head (black spot at inner margin of eye), by the large size and by the structure of male genitalia.

Bryocorini Baerensprung, 1860

Bryocorides Baerensprung, Rep. Berl. Ent. 4:13; Bryocorini Carvalho, Bol. Mus. Goeldi 11(2):16, 1955.

The tribe includes several genera. Most species are of small size, with first segment of antenna longer than wide, scutellum not cystiform, connexivum not exposed, head without a neck or if present then first antennal segment noticeably long, rostrum in the majority of species reaching middle or hind coxae but in some cases reaching only front coxae, pronotum usually punctate, body generally opaque.

Type genus of tribe: Bryocoris Fallen, 1829.

The tribe comprises a very heterogeneous group of genera having in common the uniareolate membrane (with a few exceptions) and tarsi dilated to apex.

Key to Genera

 Head with a distinct neck, eyes placed before middle; pronotum constricted anteriorly; segment I of antenna as long as pronotum; hemelytra trans-

lucent Felisacus Distant, 1904 Head without a distinct neck, eyes contiguous with pronotum: disc not constricted anteriorly or if so then first antennal segment shorter than pronotum 2 2. Eyes substylate with a short peduncle; cuneus very long and narrow, about three to four times as long as wide at base, curved; first antennal segment Prodromopsis Poppius, 1912 Eyes not pedunculate; if cuneus as long as above, then first antennal segment not noticeably narrowed 3. Small totally black species with body strongly rounded, hemispherical at corial level; corium and clavus smooth 4 Species of medium size or if small with body rounded or hemispherical then not totally black or with corium and clavus punctate 5 4. Body except antennae and tarsi black; scutellum with punctures; calli separated; segment I of antenna three times shorter than width of vertex Body dark brown with antennae and legs pale yellow; scutellum smooth; calli fused; segment I of antenna as long as width of vertex Hemisphaerocoris Poppius, 1912 5. Species with hemelytra noticeably narrowed beyond middle; exocorium with a characteristic fossa level with apex of clavus; cuneus five times as long as Hemelytra not noticeably narrowed beyond middle; if cuneus long 'then exocorium without a lateral fossa 6 6. Rostrum long, reaching the hind coxae or beyond 7 Rostrum short, not reaching beyond middle coxae 10 7. Eyes small, situated in front of head; membrane with indication of a second, small, elongate areola; body fairly pilose Bromeliaemiris Schumacher, 1919 Eyes large or of medium size, contiguous with pronotum; membrane uniareolate 8 8. Cuneus very long and large, narrowing towards apex and reaching apex of membrane; areola very long; species usually reddish to reddish lutescent Thaumastomiris Kirkaldy, 1902 Cuneus short or fairly long but not quite reaching apex of membrane 9 9. Pronotum distinctly narrowed anteriorly, calli large and prominent; first antennal segment as long as or shorter than width of vertex; species mostly black Harpedona Distant, 1904 Pronotum not distinctly narrowed anteriorly, calli not prominent; first antennal segment longer than width of vertex; species brown, pale or pale and brown Ambunticoris n.gen. 10. Greenish species with eyes prominent, produced bacwards over anterior margin of pronotum; cuneus large, much longer than wide at base

Species with other color or if greenish then cuneus

shorter and eyes not produced backwards over

¥

17. Frons produced in front over base of clypeus; vertex sulcate longitudinally, prominent at hind border; pubescence of antenna with hairs shorter than thickness of segments Frontimiris n.gen. Frons rounded in front, not produced over base of clypeus; vertex smooth, not sulcate transversally or prominent at hind border; pubescence of antenna with hairs longer than thickness of segments

. Palaeofurius Poppius, 1912

Ambunticoris n.gen.

Body elongate, erectly pilose, slightly widened laterally. Head vertical, wider than long, vertex depressed transversally, eye large, contiguous with pronotum, hind margin overlapping collar-like area, curved posteriorly, frons prominent projecting slightly over clypeus, rounded in front, jugum large; rostrum thick, reaching the hind coxae; antenna slender, segments I and II with approximately same thickness, hairs as long as diameter of segments.

Pronotum finely but distinctly punctate, calli prominent, reaching lateral margins of disc, widely separated from each other, hind margin slightly sinuated, humeral angles broadly rounded; scutellum flat, depressed at base.

Hemelytra finely punctate, erectly pubescent, embolium explanate, narrow, cuneus much longer than

wide at base, curved, areola large, nervure thick, pubescent, membrane translucent, fairly short.

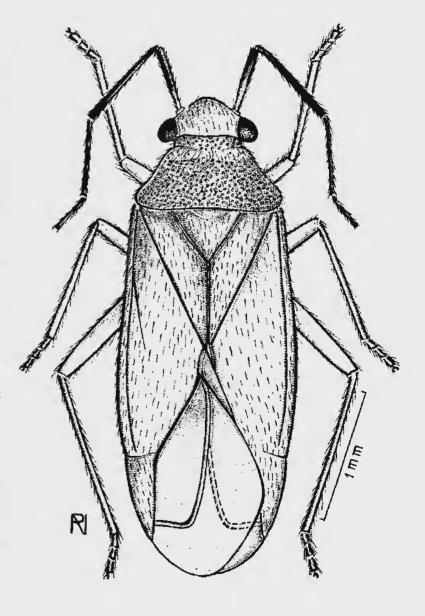
Legs of moderate length, tarsi and claws of the Bryocorini type.

Type species of genus: Ambunticoris ochraceus n.sp.

This genus has some resemblance with *Frontimiris* n.gen. but fifers by the much less pronounced frons, vertex also only slightly depressed, longer cuneus and longer and thicker rostrum.

Key to Species of Ambunticoris n. gen.

1. Body totally ochraceous ochraceus n.sp. Body with head, pronotum, scutellum, clavus and embolium black nigroemboliatus n.sp.



Ambuticoris ochraceus n.sp. - Fig. 56: holotype, male.

Ambunticoris ochraceus n.sp. (Figs. 56-59)

Characterized by its ochraceous color and by the structure of the male genitalia.

Male: Length 3.8 mm, width 1.4 mm. Head: Length 0.3 mm, width 0.8 mm, vertex 0.48 mm. Atenna: Segment I, length 0.4 mm; II, 0.7 mm; IV, 0.2 mm. Pronotum: Length 0.6 mm, width at base 1.1 mm. Cuneus: Length 0.64 mm, width at base 0.24 mm (holotype).

General coloration ochraceous to pale yellow; eyes and antennae (except basal portion of segment I) dark brown; outer margin of scutellum, claval commissure, inner margin of membrane and outer margin of embolium fuscous to brown.

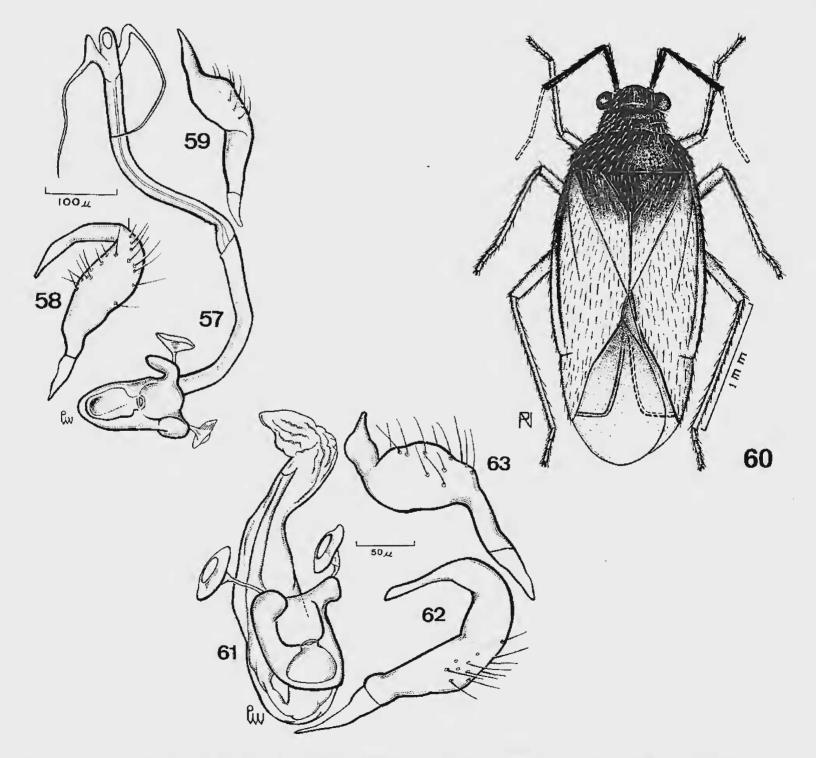
Embolium and pronotum laterally noticeably pilose.

Genitalia: Penis (Fig. 57) with a peculiar vesica Genitalia: Penis (Fig. 57) with a peculiar vesica and two flagellate appendices on both sides of secondary gonopore. Left paramere (fig. 58) strongly curved, long and erect pubescence dorsally. Right paramere (fig. 59) smaller, pointed apically.

Female: Unknown.

Holotype: male, NEW GUINEA: NE Finisterre Range, Saidor, Kiambavi, VI. 11 - VII, 22-29, 1958. W. W. Brandt, in the Collection of the Bernice P. Bishop Museum, Honolulu.

Differs from *Ambunticoris nigroemboliatus* n.sp. by the color of the body and by the structure of the male genitalia.



Ambuticoris ochraceus n.sp. – Fig. 57: penis; fig. 58: left paramere; fig. 59: right paramere. Ambuticoris nigroemboliatus n.sp. – Fig. 60: holotype, male; fig. 61: penis; fig. 62: left paramere; fig. 63: right paramere.

Ambunticoris nigroemboliatus n.sp. (Figs. 60-63)

7

Characterized by the coloration of the body and the structure of male genitalia.

Male: Length 2.8 mm, width 1.2 mm. Head: Length 0.2 mm, width 0.6 mm, vertex 0.36 mm. Antenna: Segment I, length 0.3 mm; II, o.5 mm; III - IV, broken. Pronotum: Length 0.4 mm, width at base 0.9 mm. Cuneus: Length 0.60 mm, width at base 0.32 mm.

General coloration dark brown to black with pale areas; head, antenna, pronotum, scutellum, base of clavus, embolium (except inner apical portion), outer margin of cuneus narrowly fuscous to dark black or brown, membrane translucid; apical portion of corium and inner portion of cuneus pale yellow. Underside of body pale yellow, propleura and base of first coxae black, abdomen and legs pale, tibiae tending to castaneous towards base.

Cuneus about twice as long as wide at base, embolium thickened basally, rostrum reaching hind coxae, tibiae short, vertex noticeably sulcate transversally.

Genitalia: Penis (fig. 61) with two lateral flagella on both sides of secundary gonopore. Left paramere (fig. 62) noticably curved, with long, erect dorsal setae. Right paramere (fig. 63) enlarged at middle, pointed apically.

Female: Similar to male in general aspect and coloration.

Host plant: Pandanus.

Holotype: male, NEW GUINEA: Neth, above I far 500-750 m, VI. 23.1959, J.L. Gressit, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratype: female, same data as type.

Differs from Ambunticoris ochraceous n.sp. by the color of body and by the structure of the male genitalia.

Bromeliaemiris Schumacher, 1919

Bromeliaemiris Schumacher, Zeit. Wiss. Insbiol. 14: 223; id. Carvalho, Arq. Mus. Nac. R. Jan. 44: 92, 1957.

Mertilanidea Ghauri, J. Nat. Hist. 9:614, 1975 figs. (n.syn.)

Species of medium size, body elongate, desenly pilose with fine erect hairs. Head vertical, vertex flat. immarginate, eyes relatively small, rounded, prominent, somewhat removed from pronotum; rostrum thick, reaching to posterior coxae or beyond; antenna linear, second segment about four times as long as first, segments II - IV clothed with fine, erect hairs.

Pronotum finely punctulate, posterior margin of disc nearly straight, lateral margins noticeably sinuate, humeral angles rounded, calli distinct, collar differentiated: scutellum small, impressed at base.

Hemelytra finely and shallowly punctulate, emboliar margins subparallel, apex of large areola rounded, small areola obsolete. Abdomen with pygophore provided with outgrowths or projections, left paramere small, right paramere larger.

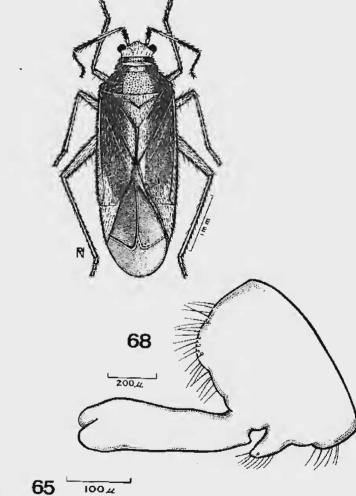
Type species of genus: Bromeliaemiris bicolor Schumacher, 1919.

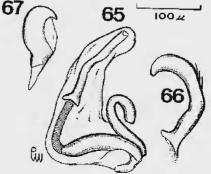
This genus belongs to the group of genera with sessil eyes and rostrum reaching the hind coxae or

beyond. Most species show lutescent to reddish coloration.

Key to Species of Bromeliaemiris Schumacher

- 3. Body reddish, clavus and endocorium dark brown; antenna reddish rubrinus n.sp. Body lutescent, clavus and endocorium black; antenna black morobensis n.sp.





Bromeliaemiris fasciatus (Ghauri) — Fig. 64: male; fig. 65: penis; fig. 66: left paramere; fig. 67: right paramere; fig. 68: pygophore.

Bromeliaemiris fasciatus (Ghauri, 1975) n. comb. (Figs. 64-68)

Mertilanidea fasciatus Ghauri, J. Nat. Hist. 9:616, figs.

Characterized by coloration of the body, by the small size and by the small, slightly pedunculate eyes.

Male: Length 3.7 mm, width 1.2 mm. Head: Length 0.2 mm, width 0.7 mm, vertex 0.40 mm. Antenna: Segment I, length 0.2 mm; II, 0,8 mm; III - IV, broken. Pronotum: Length 0.8 mm, width at base 1.2 mm. Cuneus: Length 0.64 mm, width at base 0.32 mm.

General coloration cinnamon to dark brown with lutescent areas; eyes and segment I of antenna (except apex and base) black, segment II lutescent at basal portion, segments III - IV fuscous; a lutescent longitudinal fascia beginning on vertex and running backwards through collar, pronotum, scutellum, middle of clavus and cuneus paler, membrane fuscous; sides of pronotum and sides of head dark brown. Underside of body lutescent.

Rostrum reaching hind coxae, eyes small, protruding forwards, somewhat pedunculate.

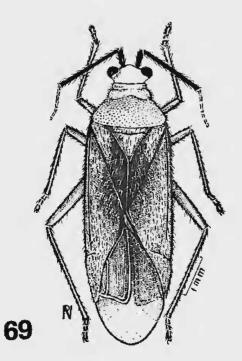
Genitalia: Penis (fig. 65) with slender basal plate. Left paramere (fig.66) falciform. Right paramere (fig. 67) short, compact. Pygophore (fig. 68) with a long and typical prolongation directed backwards.

Female: Similar to male in coloration and general aspect.

Geographical distribution: Papua New Guinea

Specimens studied: male, NEW GUINEA: Keparra Sengi nr. Kokoda, 600 m, III.28.1956, J.L. Gressit, in the Collection of the Bernice P. Bishop Museum, Honolulu.

Differs from other species in the genus by the small size and by the small eyes wich are somewhat pedunculate, protruding forwards and removed from pronotum.



Bromeliaemiris gressitti n.sp. (Fig. 75)

Characterized by the noticeably black hemelytra and by the long and narrow cuneus.

Female: Length 4.8 mm, width 1.2 mm. Head: length 0.3 mm, width 0.7 mm, vertex 0.60 mm. Antenna: Segment I, length 0.3 mm; II, 1.0 mm; III, 0.7 mm, IV, 0.3 mm. Pronotum: Length 0.8 mm, width at base 1.3 mm. Cuneus: Length 0.80 mm, width at base 0.32 mm.

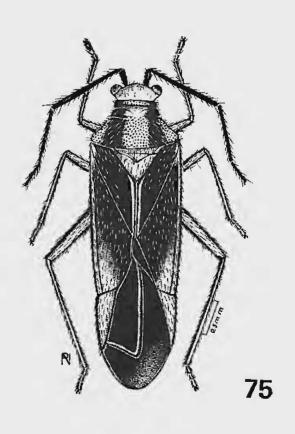
General coloration dark brown to black with lutescent and reddish areas; eyes and antennae black (except segment I wich is lutescent), head, fascia running longitudinally through collar and widening backwards on disc (between calli), lateral margins and humeral angles, scutellum, claval commissure, embolium, outer apical portion of corium, cuneus and nervure of membrane reddish lutescent to reddish purple; clavus, endocorium and membrane black. Underside of body reddish lutescent, abdomen pale yellow to ochraceous, legs reddish lutescent, femora paler towards bases.

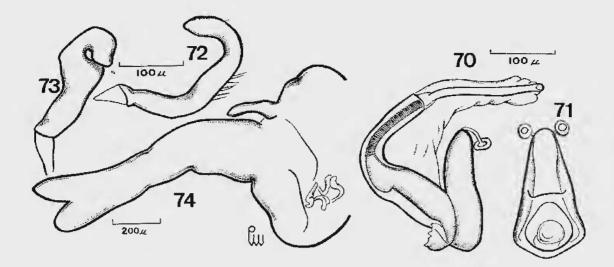
Eyes small, segment I of antenna short, cuneus noticeably long and narrow.

Male: Unknown.

Holotype: female, NEW GUINEA: Neth. Ifar, 300-600 m, June 22, 1959, J. L. Gressitt, in the Collection of the Bernice P. Bishop Museum, Honolulu.

Differs from other species in the genus by the noticeably dark endocorium, clavus and membrane, as well as, by the long and narrow cuneus.





Bromeliaemiris morobensis n.sp. — Fig. 70: penis; fig. 71: basal plate of penis; fig. 72: left paramere; fig. 73: right paramere; fig. 74: pygophore.

Bromeliaemiris morobensis n.sp. (Figs. 69-74)

7

Characterized by the color mostly lutescent and by the structure of the male genitalia.

Male: Length 6.6. mm, width 2.0 mm. Head: Length 0.4 mm, width 1.0 mm, vertex 0.56 mm. Antenna: Segment I, length 1.0 mm; II, 1.6 mm; III-IV, broken. Pronotum: Length 1.1 mm, width at base 1.6 mm. Cuneus: Length 1.36 mm, width 0.52 mm.

General coloration lutescent with light brown areas; head and antenna (except segment I) black; hemelytra (except basal portion externally and embolium) light brown to brown; membrane fuscous, nervure lutescent, cuneus and apex of corium with reddish tinge (in one specimen).

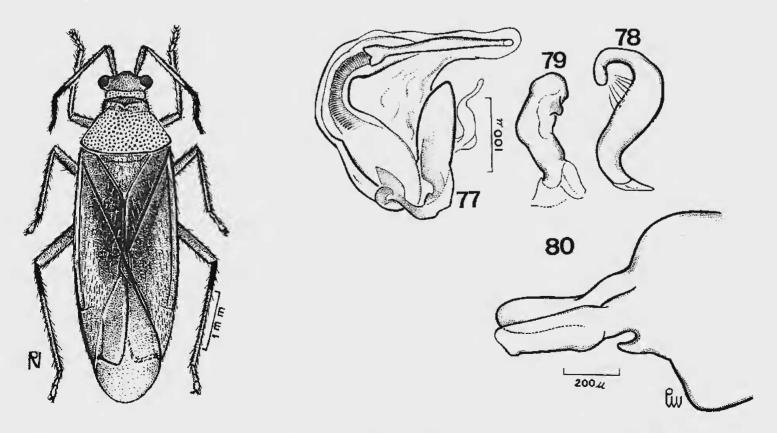
Cuneus long, areolar portion much longer than apical portion of membrane.

Genitalia: Penis (fig. 70) with a slender and peculiar basal plate (fig. 71). Left paramere (fig. 72) falciform, blunt apically. Right paramere (fig. 73) smaller, strongly curved subapically. Pygophore (fig. 74) with a very long appendage directed backwards.

Female: Unknown.

Holotype: male, NEW GUINEA: NE Wau, Morobe District, 1200 m, 1-10.V.1963, J. Sedlacek (light trap), in the Collection of the Bernice P. Bishop Museum, Honolulu. *Paratype:* Wum, Upper Jimmi, V. 840 m, VII. 18, 1955, J.L. Gřessitt.

Differs from *Bromeliaemiris rubrinus* n.sp. by the lutescent color and by the more extensive brown area of the hemelytra.



Bromeliaemiris rubrinus n.sp. – Fig. 76: male, holotype; fig. 77: penis; fig. 78: left paramere; fig. 79: right paramere; fig. 80: pygo-phore.

Bromeliaemiris rubrinus n.sp. (Figs. 76-80)

Characterized by the predominant reddish color and by the structure of the male genitalia.

Male: Length 5.9 mm, width 1.8 mm. Head: Length 0.4 mm, width 0.9 mm, vertex 0.52 mm. Antenna: Segment I, length 0.4 mm; II, 0.8 mm; III, 0,3 mm IV, 0.2 mm. Pronotum: Length 1.2 mm, width at base 1.5 mm. Cuneus: Length 0.9 mm, width at base 0.44 mm.

General coloration red to reddish lutescent with light brown areas; eyes, apex of second antennal segment, segments III - IV brown; clavus (except extreme base and commissure), endocorium contiguous to clavus (forming a continuous longitudinal fascia) dark fuscous, membrane fuscous, nervure reddish. Underside of body and legs red, abdomen partially castaneous.

Cuneus long, areolar area much longer than apical portion of membrane, eyes small, collar wider than thickness of first antennal segment, rostrum reaching middle coxae.

Genitalia: Penis (Fig. 77) of the generic type. Left paramere (fig. 78) strongly curved apically. Right paramere (fig. 79) compact, apex blunt. Pygophore (Fig. 80) with a blunt and large appendage directed backwards.

Female: Unknown.

Holotype: male, NEW GUINEA: Neth., Biak I., Mangrowawa, 50-100 m, V. 30, 1959, T.C. Maa, in the Collection of the Bernice P. Bishop Museum, Honolulu.

Differs from other species in the genus by the extensively red body and by structure of the male genitalia.

Bryocorellisca n. gen.

Body elongate oval with dense semi- adpressed or semierect pubescence. Head wider than long, vertex marginate, slightly carinate, frons rounded, eyes exserted following concavity of vertex, contiguous with pronotum, clypeus short, jugum large, lorum and gena small; rostrum reaching apex of mesosternum; antenna slender cylindrical, segment I narrowed towards base, as long as or longer than width of vertex, segment II about as long as I, segments III - IV very slender, beset with pubescence short, about as long as thinckness of segments.

Pronotum punctate, calli obsolete, lateral margins carinate and provided with setae arising from minute tubercles, hind margin straight, humeral angles rounded; scutellum depressed at base, punctate, with apex pointed.

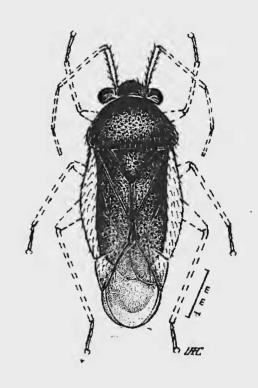
Hemelytra with clavus and corium punctate, embolium laminate, translucid, wide and slightly reflexed; cuneus about as long as wide at base or slightly longer; membrane uniareolate with vestige of the small areola, translucid. Ostiolar peritreme with a small tubercle on its upper margin. Legs of moderate length, tarsi and claws of the Bryocorini type.

Type species of genus: Bryocorellisca pallidoemboliata n.sp.

This genus approaches *Crassiembolius* n.gen. but differs by the length of the first antennal segment and by the laminate embolium.

Key to Species of Bryocorellisca n.gen.

- 2. Segment I of antenna dark towards apex; corium pale basally pallidoemboliata n.sp. Segment I of antenna pale; corium totally black novaguineae n.sp.



Bryocorellisca novaguineae n.sp. - Fig. 81: female, holotype.

Bryocorellisca novaguineae n.sp. (Fig. 81)

Characterized by the coloration of the body and size,

Female: Length 2.6 mm, width 1.0 mm. Head: Length 0.2 mm, width 0.6 mm, vertex 0,36 mm. Antenna: Segment I, length 0.3 mm; II - IV, broken. Pronotum: length 0.5 mm, width at base 0.9 mm. Cuneus: Length 0.20 mm, width at base 0.16 mm.

General coloration dark brown with pale yellow areas; head light brown, clypeus, sides of head, rostrum and segment I of antenna pale; embolium and cuneus (except inner margin) pale, translucid; membrane fuscous, pale apically. Underside of body brown, abdomen darker, coxae and legs pale.

Rostrum reaching apex of mesosternum, propleura punctate, meso and metapleura rugouse punctate, ostiolar peritreme shagreen, pronotum, scutellum, clavus and corium punctate, shortly pubescent, embolium very wide at middle portion.

Male: Unknown.

Holotype: female, NEW GUINEA: Neth, Holandia area, W. Sentani, Cyclops Mts. 150-250m, June 22, 1959, T. C. Maa, Sweeping, in the Collection of the Bernice P. Bishop Museum, Honolulu.

Differs from *Bryocorellisca pallidoemboliata* n.sp. by the color of corium and segment 1 of antenna.

Bryocorellisca pallidoemboliata n.sp. (Figs. 82-85)

Characterized by the coloration of the body and by structure of the male genitalia.

Male: Length 3.0 mm, width 1.2 mm. Head: Length 0.1 mm, width 0.7 mm, vertex 0.36 mm. Antenna: Segment I, length 0.5 mm; II, o,5 mm; III - IV, broken. Pronotum: Length 0.6 mm, width at base 1.1. mm. Cuneus: Length 0.32 mm, width at base 0.24 mm.

Genrral coloration dark brown with pale yellow, translucid areas; head (except clypeus and lateral portion), antenna (except base of segment I), pronotum (except posterior margin), scutellum (except apex) and clavus dark brown; corium dark with basal third of endocorium e apical median spot pale yellow, translucid, embolium and cuneus ochraceous, membrane fuscous, pale apically. Underside of body dark brown, coxae, legs and rostrum pale yellow.

Genitalia: Penis(Fig. 83) of the Bryocorini type. Left paramere (fig. 84) as in illustration. Right paramere (fig. 85) elongate, enlarged and narrowed at apical portion.

Female: Unknown.

Holotype: male, NEW GUINEA: Wau, Hospital CK. 1200 m, 22.V.1965. J. Sedlacek, malaise trap, in the Collection of the Bernice P. Bishop Museum, Honolulu.

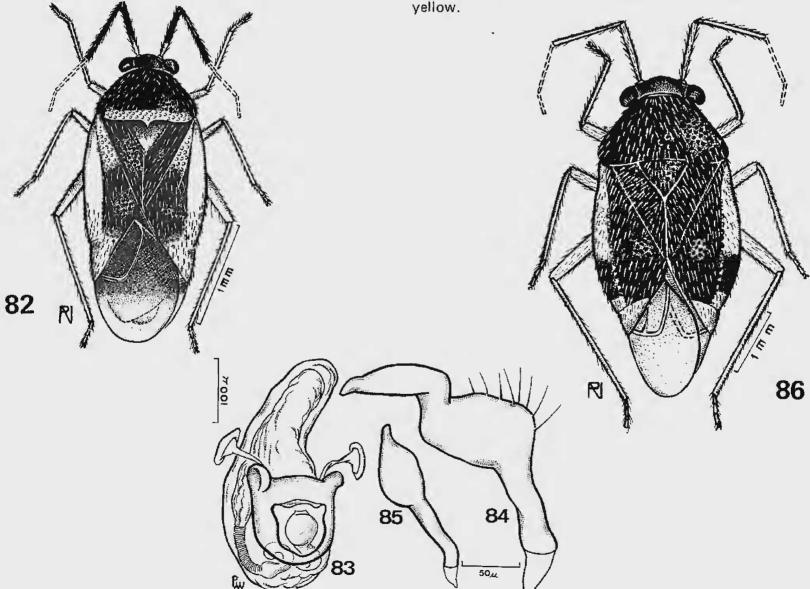
Differs from *Bryocorellisca novaguineae* n.sp. by the color of antennae, hind margin of pronotum and corium.

Bryocorellisca pilosa n.sp. (Fig. 86)

Characterized by the coloration of the body and size.

Female: Lenght 2.6 mm, width 1.1 mm. Head: Length 0.1 mm, width 0.6 mm, vertex 0.32 mm. Antenna: Segment I, length 0.4 mm; II, 0.5 mm; III-VI, broken. Pronotum: Length 0.6 mm, width at base 1.0 mm. Cuneus: Length 0.20 mm, width at base 0.24 mm.

General coloration chocolate brown with pale yellow areas; head (except clypeus and lateral portion) and pronotum chocolate brown, antennae pale, scutéllum, clavus and corium dark brown, embolium pale at basal half and extreme apex (subapical portion with a characteristic castaneous spot); cuneus and membrane pale. Underside of body dark brown, coxae and legs pale



Bryocorellisca pallidoemboliata n.sp. — Fig. 82: male, holotype; fig. 83: penis; fig. 84: left paramere; fig. 85: right paramere. Bryocorellisca pilosa n.sp. — Fig. 86: female, holotype.

Hemelytra densely pilose, hairs of embolium adpressed and directed outwards, scutellum prominent at apical third, cuneus as long as wide at base.

Male: Unknown.

Holotype: female, NEW GUINEA: NE Bubia, Markham V., 50 m, Sept. 17, 1955, J. L. Gressitt, in the Collection of the Bernice P. Bishop Museum, Honolulu.

Differs from other species in the genus by the pubescence of clavus and by the castaneous spot of embolium.

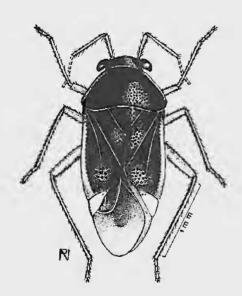
Carinimiris n.gen.

Body elongate, glabrous, shining. Head much wider than long, vertex marginate, frons rounded, eyes exserted, semi-pedunculated, with hind margin following curvature of vertex, contiguous with pronotum, clypeus rounded in front, jugum and lorum vertical; rostrum reaching base of hind coxae; antennae cylindrical, slender, the hairs longer than thickness of segments, segment I as long as width of vertex.

Pronotum strongly punctate, calli obsolete, lateral margins carinate, hind margin slightly immarginate at middle, humeral angles rounded; scutellum punctate, slightly convex.

Hemelytra with clavus and corium strongly punctate, embolium translucid, noticeably narrowed towards base, cuneal fracture well marked, cuneus punctate, longer than wide at base, membrane long, biareolate. Legs robust.

Type species of genus: Carinimiris lustrosus n.sp. Differs from Dioclerus Distant, 1910 by its smaller size and by the lateral carina of pronotum.



Carinimiris lustrosus n.sp. - Fig. 87: female, holotype.

Carinimiris lustrosus n.sp. (Fig. 87)

Characterized by the coloration of body and size. Female: Length 2.6 mm, width 1.1 mm. Head: Length 0.2 mm, width 0.7 mm, vertex 0.32 mm. Antenna: Segment I, length 0.3 mm; II, 0.4 mm; III-IV, broken. Prontoum: Length 0.5 mm, width at base 1.0 mm. Cuneus: Length 0.20 mm, width at base 0.24 mm.

General coloration dark brown with pale yellow areas; head light brown with lateral portion and rostrum

ochraceous, antennae pale; pronotum, scutellum, clavus and corium dark brown, shining, embolium (except base and apex which are fuscous) and cuneus pale, membrane fuscous, translucid. Underside of body dark brown.

Male: Unknown.

Holotype: female, NEW GUINEA: NE Goroka, Kabebe, 1800m, 24.VI.1955, J. L. Gressistt, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratype: female, Nondungl, 1600 m, 8.VIII.1955, light trap, J. L. Gressitt.

Crassiembolius n.gen.

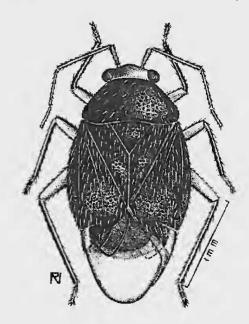
Body elongate, ovoid, enlarged at middle, compact, beset with semierect, dense pubescense. Head much wider than long, vertex marginate, carinate, frons rounded, eyes exserted with hind margin following curvature of vertex, contiguous with pronotum, portion of head below eyes short, rostrum reaching apex of mesosternum; antennae with segment I shorter than with of vertex, segment II about twice as long as I, beset with hairs approximately as long as thickness of segment, segments III-IV very slender.

Pronotum strongly punctate, lateral margins carinate, with setae arising from minute tubercles, hind margin slightly immarginate, disc prominent, calli obsolete, humeral angles rounded; scutellum punctate, flat, slightly depressed at base.

Hemelytra with corium and clavus punctate, embolium incrassate, laminate, rounded externally, cuneus about as long as wide at base, membrane long with vestige of the small areola. Legs of moderate length, tarsi and claws of the Bryocorini type.

Type species of genus: Crassiembolius nigrus n.sp. Differs from Bryocorellisca n.gen. by the incrassate embolium and by the segment II of antenna shorter than width of vertex.

Key to Species of Crassiembolius n.gen.



Crassiembolius nigrus n.sp. - Fig. 88: female, holotype.

Crassiembolius nigrus n.sp. (Fig. 88)

Characterized by the coloration of the body and size.

Female: Length 2.6 mm, width 1.4 mm. Head: Length 0.2 mm, width 0.7 mm, vertex 0.40 mm. Antenna: Segment 1, length 0.1 mm; 11, 0.4 mm; 111, 0.3 mm; 1V, broken. Pronotum: Length 0.6 mm, width at base 1.2 mm. Cuneus: Length 0.36 mm, width at base 0.24 mm.

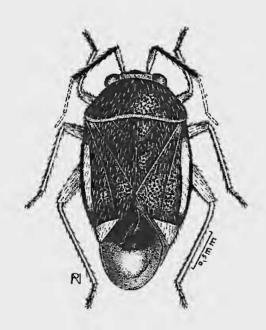
General coloration dark brown with pale yellow areas; head light brown, frons and clypeus black, antenna black, segment I paler towards base, hind margin of pronotum narrowly, extreme apex of scutellum, middle portion of embolium and cuneus pale, membrane fuscous. Underside of body dark brown, coxae and legs pale yellow.

Rostrum reaching base of hind coxae, pronotum scutellum and corium punctate, pubescence long, erect, segment II of antenna with long erect hairs about as long as or longer than thickness of segment.

Male: Unknown.

Holotype: female, PAPUA: Catalina State, 48 km N of Port Moresby, 500 m, Sept. 3, 1959, T. C. Maa, in the Collection of the Bernice P. Bishop Museum, Honolulu. *Paratype:* female, River Tor (mouth), 4 km E of Hol. Maffin, 2-5.VII, 1959, T. C. Maa.

Differs from *Crassiembolius semipallidus* n.sp. by the totally black embolium.



Crassiembolius semipallidus n.sp. - Fig. 89: female, holotype.

Crassiembolius semipallidus n.sp. (Fig. 89)

Characterized by the coloration of body and size. Female: Length 2.8 mm, width 1.3 mm. Head: Length 0.2 mm, width 0.7 mm, vertex 0.36 mm. Antenna: Segment 1, length 0.2 mm; 11, 0.5 mm; 111-1V, broken. Pronotum: Length 0.7 mm, width at base 1.2 mm. Cuneus: Length 0.20 mm, width at base 0.24 mm.

General coloration castaneous with ochraceous areas; head with frontal portion and clypeus black, lateral portion and rostrum pale yellow, antennae black,

segment I pale, black apically; pronotum castaneous with hind margin narrowly pale; scutellum paler apically; clavus and corium castaneous, embolium ochraceous at middle, with external margin, base and apex black; cuneus pale yellow, membrane fuscous with a central pale spot. Underside of body dark brown, apices of coxae and legs pale yellow.

Male: Unknown.

Holotype: NEW GUINEA: Neth. above Ifar, 300-750 m, VI.23, 1959, J. L. Gressitt, in the Collection of the Bernice P. Bishop Museum, Honolulu.

Differs from *Crassiembolius nigrus* n.sp. by the ochraceous spot of the embolium.

Cuneomiris n.gen.

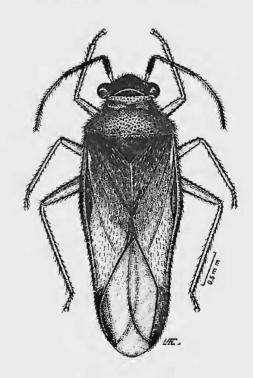
Species of small size, body elongate somewhat broadened at middle, fine, dense and erectly pilose. Head vertical, frons slightly prominent, vertex smooth, immarginate; eyes contiguous with pronotum; antennae short, segment I shorter than width of vertex, segment II slightly longer than I, segments III-IV also short, finely pubescent; rostrum not visible (carded specimen).

Pronotum distinctly punctate, collar well marked, calli transversal, small, hind margin of disc straigth, humeral angles rounded, lateral margins sinuate laterally behind calli; scutellum small, flat.

Hemelytra characteristic, narrowed towards apex, embolium thickened, exocorium showing a characteristic fossa situated externally at level with apex of clavus, cuneus very long and narrow, curved externally; membrane with long and large areola, nervure hairy.

Legs relatively short, tibiae slender, with short erect hairs.

Type species of genus: Cuneomiris elongatus n.sp. Differs from allied genera by the characteristic corial fossa and by the very long and narrow cuneus. Males of Emboliocoris Carvalho & China, 1951 and Pachymerocerus Reuter, 1909 from the Neotropical Region present analogous fossae on hemelytra.



Cuneomiris elongatus n.sp. - Fig. 90; male, holotype.

Cuneomiris elongatus n.sp. (Fig. 90)

Characterized by the coloration of the body and

by the very long and narrow cuneus.

Male: Length 3.6 mm, width 1.3 mm. Head: Length 0.2 mm, width 0.6 mm, vertex 0.32 mm. Antenna: Segment I, length 0.2 mm; II, 0.4 mm; III, 0.5 mm; IV, 0.3 mm. Pronotum: Length 0.50 mm, width at base 1.1 mm. Cuneus: Length 1.12 mm, width at base 0.20 mm (holotype).

General coloration cinnamon with black and pale areas; head and antenna (except base of segment I) black, clypeus and sides of head cinnamon, collar white, disc of pronotum and scutellum cinnamon to fuscous; hemelytra cinnamon, bases and apices of embolium and corium (larger area apically) pale yellow, cuneus cinnamon to fuscous, membrane and nervure fuscous. Underside of body cinnamon, abdomen fuscous, legs cinnamon to pale yellow.

Genitalia: Not dissected since characters of hemelytra permit to identify readly the species.

Female: Unknown.

Holotype: male, NEW GUINEA: NE U. Watut, SW 1800-2200 m, 2.V, 1958, J. L. Gressitt, in the Collection of the Bernice P. Bishop Museum, Honolulu.

Felisacus Distant, 1904

Felisacus Distant, Faun. Brit. Ind. Rhync. 2:439; id. Poppius, Ofv. F. Vet. Soc. Forh. 53 A (2):3, 1911; id. Poppius, Acta Soc. Sci. Fenn. 41(3):175, 181, 1912; id. Woodward, Pac. Sci. 8(1):41, 1954; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:103, 1957.

Hyaloscytus Reuter, Ofv. F. Vet. Soc. Forh. 47(5): 1, 1904.

Liocoris Motschulsky, Bul. Soc. Nat. Mosc. 37(3): 86, 1863.

Species of small size, delicate, translucid, body smooth, shining. Head with a distinct neck, usually constricted behind eyes, the latter small, placed in front of head, quite removed from pronotum, frons slightly convex or straight, vertex in some species with a lobular projection; rostrum short, reaching middle coxae; antenna with segment I noticeably longer than width of head, shining, segment II slightly longer than I and about equal in length to III, beset with hairs usually longer than width of segment.

Pronotum with a distinct collar, noticeably narrowed behind calli which are fused and reach lateral margins, disc noticeably convex and shining, smooth, hind margin straight, lateral margins narrowing towards head, humeral angles rounded; scutellum flat, small.

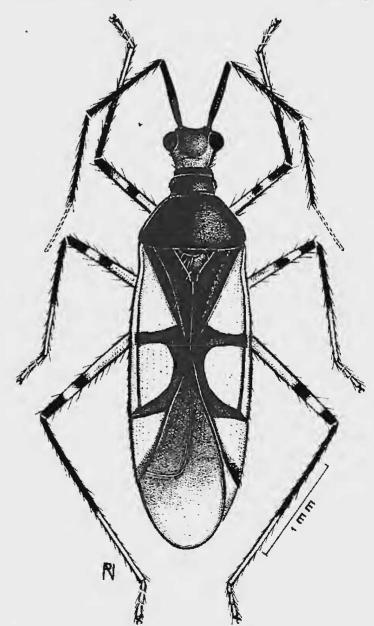
Hemelytra translucent, clavus usually with long and erect hairs, embolium well defined, cuneus slightly longer than wide at base; membrane with areola rounded apically.

Legs long and slender, with long erect hairs.

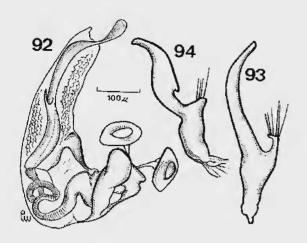
Type species of genus: Felisacus glabratus (Motschulsky, 1863).

Due to genital characters and type of antenna we prefer to place this genus in the tribe Bryocorini rather than to include it with the Monaloniini species. The genus is Indo-Pacific and all species known so far feed on ferns. Species show much variation in color reasom why only fully mature specimens should be considered for specific keys.

Key to Species of Felisacus Distant



Felisacus magnificus Distant - Fig. 91: male.



Felisacus magnificus (Distant) — Fig. 92: penis; fig. 93: left paramere; fig. 94: right paramere.

Felisacus magnificus Distant, 1904 (Figs. 91-94)

Felisacus magnificus Distant, Faun. Brit. Ind. Rhync. 2:438, fig. 284; id. Woodward, Pac. Sci. 8(1):48, fig. 4, 1954.

Felisacus pulchellus Poppius, Phil. Jour. Sci. 10: 80, 1915; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:104, 1957.

Characterized by the coloration of corium and by the structure of male genitalia.

Male: Length 3.7 mm, width 1.0 mm. Head: Length 0.4 mm, width 0.6 mm, vertex 0.24 mm. Antenna: Segment I, length 0.5 mm; II, 1.1 mm; III-IV, broken. Pronotum: Length 0.8 mm, width at base 0.9 mm. Cuneus: Length 0.52 mm, width at base 0.28 mm.

General coloration black with pale translucid to reddish areas; head (except inner margins of eyes), pronotum, scutellum, clavus and a typical x-shaped, transverse spot on corium, with anterior rami placed slightly above apex of clavus and posterior rami place over apex of corium, including commissure; membrane becoming more diluted towards apex; segment 1 of antenna, head and pronotum shining, neck pale, corium and cuneus translucid at middle, external margin of embolium and cuneus black. Underside of body black, coxae, a spot at ventral surface of abdomen pale; femora pale with a median ring and apex black, tibiae pale, black on basal third and on basal half.

Segment II of antenna enlarged at middle, vertex with a distinct raised protuberance, neck short, about as long as length of eye, scutellum noticeably pilose, femora with long setae underneath, rostrum reaching middle coxae.

Genitalia: Penis (fig. 92) with a long distal seminal duct. Left paramere (fig. 93) typical, narrowed at middle. Right paramere (fig. 94) long, curved, with a sub-basal process having setae apically.

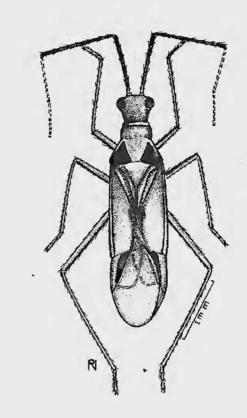
Female: Similar to male in general aspect and coloration. Length 4.0 mm, width 1.1 mm, vertex 0.32 mm, cuneus length 0.48 mm, width at base 0.28 mm.

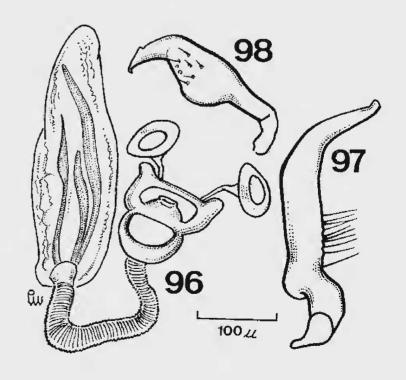
Geographical distribution: Amboina, Burma, East Indies, India, Philippine Islands (Luzon) and Papua New Guinea.

Specimens studied: males and females, NEW GUINEA: Wau, Mt. Missim, 1400-1600 m, 28.XII.1964,

L. & M. Gressitt; Neth. Waris S of Hollandia 450-500 m, VIII.16-23, 1959, T. C. Maa; NE Ahl Val. Nondug, 1750 m, VII.8, 1955, J. L. Gressitt; Papua, Darade Pln, 500 m, 80 km N Port Moresby, IX.4, 1959, T. C. Maa; Neth, Ifar, 300-600 m, June 22, 1959, J. L. Gressitt; Neth, Cyclops Mts. Ifar, 300 m, VI.22, 1959, T. C. Maa, in the Collection of the Bernice P. Bishop Museum.

Differs from all other in the genus by the spot of corium.





Felisacus minutus n.sp. — Fig. 95: male, holotype; fig. 96: penis; fig. 97: left paramere; fig. 98: right paramere.

Felisacus minutus n.sp. (Figs. 95-98)

Characterized by the small size and by the structure of the male genitalia.

Male: length 3.0 mm, width 0.7 mm. Head: Length 0.3 mm, width 0.4 mm, vertex 0.20 mm. Antenna: Segment I, length 0.7 mm; II, 0.9 mm, III-IV, broken. Pronotum: Length 0.6 mm, width at base 0.6 mm. Cuneus: Length 0.48 mm, width at base 0.16 mm (holotype).

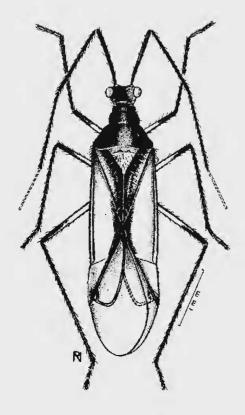
General coloration pale yellow, translucent with reddish and brown areas; eyes, extreme anterior margin of pronotum, a large spot at humeral angles and neighbouring area of disc brown to dark brown; segment I of antenna, claval commissure and claval nervure, a longitudinal spot on cuneus externally and traces on hind femora (apex and middle), base of tibiae (median and hind pair) red to reddish; membrane and segments III-IV of antenna guscous. Underside of body pale yellow, upper surface of abdomen with a reddish spot. The male paratype is totally pale yellow with segment I of antenna having same thickness throughout.

Genitalia: Penis (fig. 96) with sclerotized spiculi on both sides of the secondary gonopore. Left paramere (fig. 97) with a group of hairs at inner sub-basal margin. Right paramere (fig. 98) small, pointed apically.

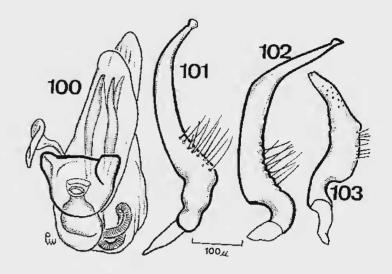
Female: Unknown.

Holotype: male, BISMARK ARCHIPELAGUS: Manu Island. Momote, 24.XII, 1959, T. C. Maa, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratype: male, same data as type.

Differs from Felisacus nigrescens rubrinus n.subsp. by the color of endoclavus, the presence of a reddish oblique spot on cuneus and by the structure of the male genitalia.



Felisacus nigrescens n.sp. - Fig. 99: male, holotype.



Felisacus nigrescens n.sp. — Fig. 100; penis; fig. 101, 102; left paramere; fig. 103; right paramere.

Felisacus nigrescens n.sp. (Figs. 99-103)

Characterized by the coloration of the body and by the structure of male genitalia.

Male: Length 4.0 mm, width 1.0 mm. Head: Length 0.2 mm, width 0.5 mm, vertex 0.20 mm. Antenna: Segment I, length 0.8 mm; II, 0.8 mm; III, 0.8; IV, 0.4 mm. Pronotum: Length 0.7 mm, width at base 0.8 mm. Cuneus: Length 0.64 mm, width at base 0.20 mm (holotype).

General coloration pale yellow translucent with dark brown to black areas; eyes, antennae, spot on upper surface of head, pronotum, clavus (except outer basal portion) a spot on endocorium surrounding apex of clavus and corial commissure, inner apical apex of corium, a longutidinal spot on inner basal margin of cuneus, margins of embolium and cuneus narrowly and nervures of membrane dark brown. Underside of body and legs pale yellow, propleura, xyphus of prosternum, mesosternum, meso and metapleura dark brown; apical half of femora, tibiae and tarsi fuscous to brown.

Segment 1 of antenna slightly enlarged sub-basally, somewhat curved outwards.

Genitalia: Penis (fig. 100) with a typical distal portion of seminal duct. Left paramere (figs. 101-102) short, with dorsal setae, as seen in figure. Right paramere (fig. 103) long, falciform, with a field of long setae.

Female: Similar to male in general aspect and coloration. Length 4.4 mm, width 1.0 mm,

Holotype: male, NEW GUINEA: Morobe District, Lake Trist, 1600 m, 21-26.XI, 1966, C. A. Samuelson, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratypes: 8 males and 19 females, NE Okapa, 1900 m, 24-25.VI, 1967, G. A. Samuelson (beating ferns); Wau, 1750 m, 6.IX, 1965, J. & M. Sedlacek (malaise trap); Wisselmeren, Okaitadi, 1800 m, Aug. 8, 1955, J. L. Gressitt; Ne Moife, 2100 m, 15 km NW Okapa, Oct. 7-14, 1959, T. C. Maa; NE Wau, Mt Missim, 1400-1600 m, 28.XII.1964, J. L. Gressitt.

This species differs from other in the genus by the coloration of the body and by the structure of the male genitalia.

Felisacus nigrescens rubrinus n.subsp. (Figs. 104-107)

7

Characterized by the reddish color of pronotum and endoclavus, by the long cuneus and by the structure of male genitalia.

Male: Length 3.9 mm, widtg 1.0 mm. Head: Length 0.2 mm, width 0.5 mm, vertex 0.24 mm. Antenna: Segment 1, length 0.9 mm; II, 1.0 mm; III, 0.8 mm; IV, 0.7 mm. Pronotum: Length 0.6 mm, width at base 0.9 mm. Cuneus: Length 0.80 mm, width at base 0.28 mm (holotype).

General coloration pale yellow translucent with reddish to reddish brown areas; head light brown above with a longitudinal fascia behind eye, antennal peduncle, frons and base of clypeus reddish; antennae fuscous to black, segment I castaneous; pronotum reddish with a longitudinal wide median pale fascia widening towards posterior margin; scutellum pale yellow; hemelytra pale, translucent, endoclavus, corial commissure, apical margin of corium, margin of embolium, margin of cuneus and nervures of membrane red to reddish fuscous. Underside of body ochraceous to lutescent, propleura reddish with two obsolete longitudinal pale

fasciae, legs ochraceous, upper portion of femora on apical half and tibiae above reddish.

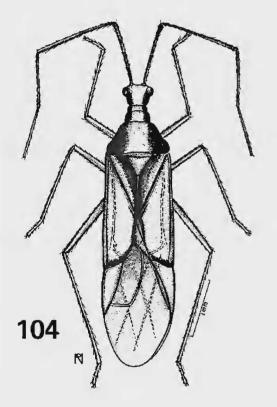
Segment I of antenna somewhat curved sub-basally, pronotum constricted, cuneus distinctly longer than wide at base.

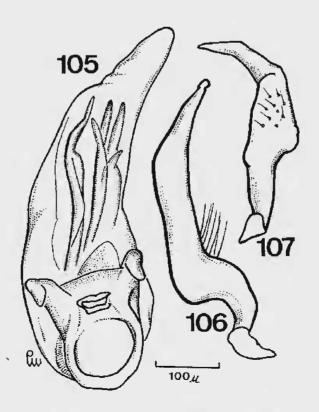
Genitalia: Penis (fig. 105) with five spiculi semisclerotized. Left paramere (fig. 106) elongate, curved at base. Right paramere (fig. 107) smaller, slender and curved apically.

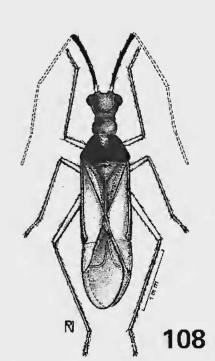
Female: With same general aspect of male, the reddish color on endocorium more pronounded, clypeus, a longitudinal fascia on upper portion of esternal area and upper surface of abdomen reddish. Length 4.6 mm, width 0.9 mm.

Holotype: male, NEW GUINEA: NE Morobe District, Lake Trist, 1600 m, 21-26.XI.1968, G. A. Samuelson, in the Collection of the Bernice P. Bishop Museum, Honolulu. *Paratype:* female, NE Mt. Wilhelm, 3000 m, July 4, 1955, J. L. Gressitt, above Keglsugl.

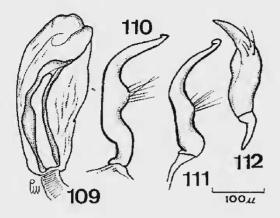
This species is very close to *Felisacus nigrescens* n.sp. but differs in the coloration of the body and shows also slight morphological differences which might place it as a subspecies.







Felisacus nigrescens rubrinus n. subsp. — Fig. 104: male, paratype; fig. 105: penis; fig. 106: left paramere; fig. 107: right paramere. Felisacus nigricornis Poppius — Fig. 108: male.



Felisacus nigricornis Poppius — Fig. 109: penis; fig. 110, 111: left paramere; fig. 112: right paramere.

Felisacus nigricornis Poppius, 1912 (Figs. 108-112)

Felisacus nigricornis Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):2; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:104, 1957.

Characterized by its small size, by the color of segment I of antenna and by the structure of male genitalia.

Male: Length 2.8 mm, width 0.7 mm. Head: Length 0.3 mm, width 0.4 mm, vertex 0.24 mm. Antenna: Segment I, length 0.8 mm; II-IV, broken. Pronotum: Length 0.6 mm, width at base 0.7 mm. Cuneus: Length 0.48 mm, width at base 0.20 mm.

General coloration reddish with brownish black and pale yellow areas; head (except apex of clypeus), anterior portion of pronotum and scutellum red to reddish lutescent; antenna (except base of segment I) and hind portion of disc of pronotum (except middle portion with reddish tinture) dark brown to black; hemelytra pale, translucent, commissure, a spot at each side of claval apex, inner and outer margin of embolium, outer margin of cuneus, nervures of membrane fuscous. Underside of body reddish, mesosternum dark, abdomen with pale spots, coxae and legs pale, base of tibiae reddish.

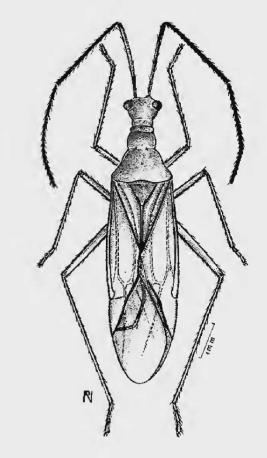
Genitalia: Penis (fig. 109) with vesica of aedeagus showing a typical distal portion of seminal duct. Left paramere (figs. 110-111) small, pointed apically. Right paamere (fig. 112) long, with a median outgrowth beset with long setae.

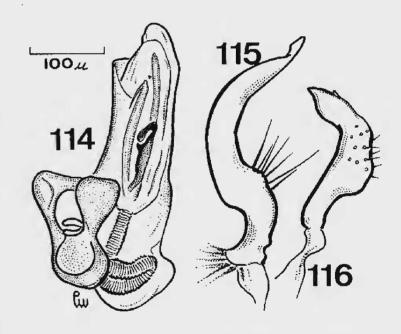
Female: Similar to male in general aspect, pale yellow, antenna black, cuneus lutescent, opaque; some specimens with antenna varying in color from pale to reddish or fuscous. The female from Biak Is. has an anomalous first antenna. Length 3.7 mm, width 1.0 mm, length of segment II of antenna 1.1 mm.

Geographical distribution: Papua New Guinea, New Britan, Biak Is.

Specimens studied: three males and six females, NEW GUINEA: Neth, Boden, 100 m, 11 km SE Oerbefaren, July 7-17, 1959, T. C. Maa; Neth, Vogelkop, Fak Fak, S. Coast of Bomberai, 10-100 m, VI.3, 1959, T. C. Maa; Ransiki, 10 m, VIII.7, 1957, Elmo Hardy. NEW BRITAIN: Gazelle Pen., Bainings, St. Paul's, 350 m, Sept. 7, 1955, J. L. Gressitt.

Differs from other species by its small size, by the black first antennal segment and by the structure of the male genitalia.





Felisacus ochraceus Usinger - Fig. 113: male; fig. 114: penis; fig. 115: left paramere; fig. 116: right paramere.

Felisacus ochraceus Usinger, 1946 (Figs. 113-116)

Felisacus ochraceus Usinger, Bul. Bishop Mus. 189: 69, fig. 3; id. Carvalho, Ins. Micronesia, 7(1):28, fig. 1956; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:104, 1957.

Characterized by its totally ochraceous coloration and by the structure of male genitalia.

Male: Length 3.8 mm, width 0.9 mm. Head: Length 0.3 mm, width 0.5 mm, vertex 0.24 mm. Antenna: Segment I, length 0.8 mm; II, 1.2 mm; III, 0.8 mm; IV, broken. Pronotum: Length 0.7 mm, width at base 0.8 mm. Cuneus: Length 0.52 mm, width at base 0.20 mm.

General coloration ochraceous; antenna fuscous, segment I ochraceous, fuscous towards apex; eye dark brown; scutellum whitish to pale yellow; cuneus lutescent, opaque; apices of femora and base of tibiae with reddish lutescent tinture; an oblique short dark fascia is present on endocorium contiguous to apex of clavus at each side.

First segment of antenna cylindrical, straight.

Genitalia: Penis (fig. 114) with two sclerotized spiculi. Left paramere (fig. 115) elongate, curved basally, slender and curved also apically. Right paramere (fig. 116) small, curved.

Female: Identical to male in general aspect and coloration. Length 5.1 mm, width 1.2 mm, vertex 0.32 mm, cuneus length 0.72 mm, width at base 0.28 mm.

Geographical distribution: Caroline Is., Mariana Is.,

Papua New Guinea.

Specimens studied: two males, NEW GUINEA: NE Wau, Bulolo River, 400-1200 m, 25.VI.1968, N. L. H. Kraus; NE Morobe District, Ulap, 800-1100 m, IX.1968, N. L. H. Kraus; Chuave, 1650-2000 m, J. L. Gressitt; NE Tapo, 1650 m, 3 km NW Kainautu, X.22, 1959, T. C. Maa; NE Nondungl, 1600 m, July 9, 1955, J. L. Gressitt.

Differs from other species in the genus by the fully ochraceous coloration and by the structure of the male genitalia.

Frontimiris n.gen.

Species of small size, body compact, densely pubescent. Head with frons protruding in front over base of clypeus, vertex with a median fossa, hind portion raised, tumid, eyes elongate, contiguous with pronotum; rostrum short, reaching apex of middle coxae; antenna short, segment I about as long as half the width of vertex, segment II twice as long as first, segments III-IV slender, pubescence short.

Pronotum noticeably punctate, calli smooth, hind margin of disc straigth, lateral margins constricted behind calli, humeral angles rounded; scutellum relatively large, depressed at base, mesoscutum covered.

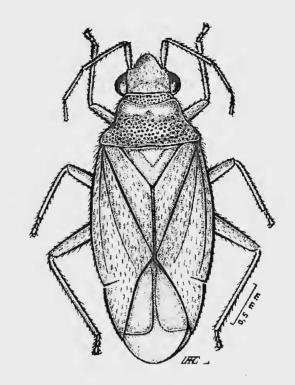
Hemelytra smooth, shortly pilose, somewhat ovoid, embolium well marked, cuneus slightly longer than wide at base, membrane short, areola large, nervure rounded apically.

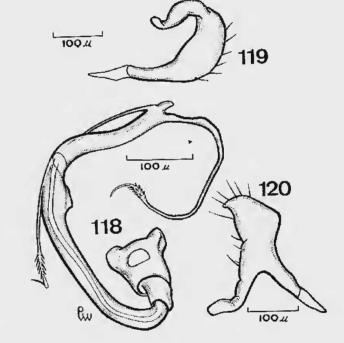
Legs short, densely pubescent.

Type species of genus: Frontimiris fossatus n.sp.

This genus belongs to the group with sessil eyes, rostrum short, reaching middle coxae and pronotum noticeably punctate. Differs from other oriental Bryocorini genera by the characteristic frons and by the depressed vertex. Two of the included species were taken on crew pine, genus *Pandanus* (Pandanaceae).

Key to Species of Frontimiris n.gen.





Frontimiria fossatus n.sp. — Fig. 117: male, holotype; fig. 118: penis; fig. 119: left paramere; fig. 120: right paramere.

Frontimiris fossatus n.sp. (Figs. 117-120)

Characterizes by ochraceous color, by the shape of frons and length of rostrum.

Male Length 3.1 mm, width 1.2 mm. Head: Length 0.5 mm, width 0.7 mm, vertex 0.40 mm. Antenna: Segment I, length 0.2 mm; II, 0,4 mm; II, 0.2 mm; IV, 0.2 mm. Pronotum: Length 0.4 mm, width at base 1.0 mm. Cuneus: Length 0.48 mm, width at base 0.36 mm (holotype).

General coloration pale yellow to citrine; eyes brown, segment IV of antenna fuscous; a streak on upper propleura anteriorly above coxal cleft and a spot on gena reddish.

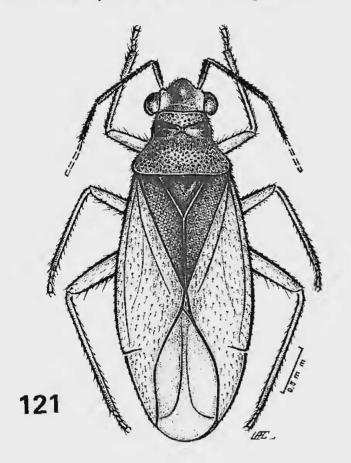
Frons pointed, rostrum reaching apex of middle coxae, cuneus not noticeably rounded externally.

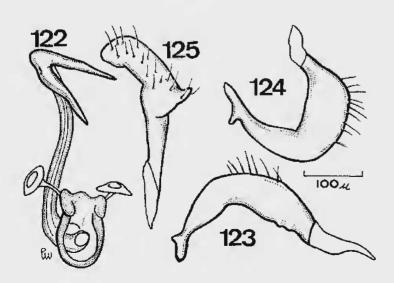
Genitalia: Penis (fig. 118) with two peculiar flagellate appendages on both sides of secondary gonopore. Left paramere (fig. 119) strongly curved, irregular near apex. Right paramere (fig. 120) with a long basa lobe.

Female: Similar to male in color and general aspect. Length 3.0 mm, width 1.2 mm, cuneus length 0.60 mm, width at base 0.52 mm.

Holotype: male, NEW GUINEA: Neth. Biak Is. Strand, VI.24, 1959, T. C. Maa, in the Collection of the Bernice P. Bishop Museum, Honolulu. *Paratype:* three males and fourteen females, same data as type.

Differs from *Frontimiris nigrifrons* n.sp.by is uniform color, by the shape of frons, by the length of rostrum and by the structure of male genitalia.





Frontimiris nigrifrons n.sp. (Figs. 121-125)

Characterized by the color of frons, by the length of rostrum and by the structure of male genitalia.

Male: Length 3.4 mm, width 1.3 mm. Head: Length 0.3 mm, width 0.7 mm, vertex 0.40 mm. Antenna: Segment I, length 0.2 mm; II, 0.6 mm; III, 0.4 mm; IV, broken. Pronotum: Length 0.5 mm, width at base 0.9 mm. Cuneus: Length 0.76 mm, width at base 0.32 mm (holotype).

General coloration fuscous to brown with black and pale areas; vertex, frons and clypes black, inner margins of eye pale, antenna fuscous, segment I pale (fuscous towards apex), lateral sides of head and rostrum (except apex) pale; pronotum, scutellum, clavus, corial commissure, membrane and nervure brown to fuscous; hemelytra externally, including cuneus (except external margin which is black) pale yellow. Underside of body fuscous, legs (including coxae) pale.

Frons rounded, rostrum reaching apex of hind coxae, cuneus noticeably rounded externally.

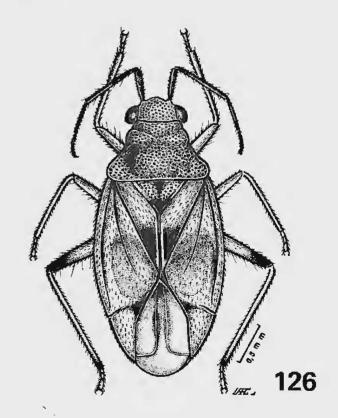
Genitalia: Penis (fig. 122) with two appendages on both sides of secondary gonopore. Left paramere (figs. 123-124) curved, with a characteristic apex. Right paramere (fig. 125) with a small and short basal lobe.

Female: Similar to male in general aspect and coloration.

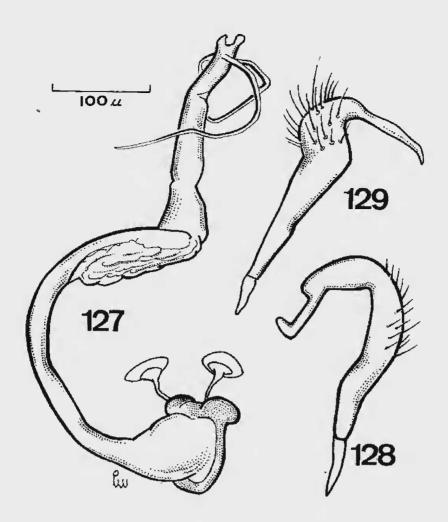
Host plant: Pandanus.

Holotype: male, NEW BRITAIN: Gaulin, Gazelle Pen., V.23.1956, J. L. Gressitt, on Pandanus. Paratypes: three males, same data as type, in the Collection of the Bernice P. Bishop Museum, Honolulu and of the autor.

Differs from *Frontimiris fossatus n.sp. by the black from and clypeus, by the longer rostrum and by the structure of male genitalia.



Frontimiris nigrifrons n.sp. — Fig. 121: male, holotype; fig. 122: penis; figs. 123-124: left paramere; fig. 125: right paramere. Frontimiris obtusifrons n.sp. — Fig. 126: male, holotype.



Frontimiris obtusifrons n.sp. - Fig. 127: penis; fig. 128: left paramere; fig. 129: right paramere.

Frontimiris obtusifrons n.sp.

(Figs. 126-129)

Characterized by the colora of the body and by the structure of male genitalia.

Male: Length 3.4 mm, width 1.6 mm. Head: Length 0.2 mm, width 0.7 mm, vertex 0.44 mm. Antenna: Segment I, length 0.4 mm; II, 0.7 mm; III, 0.4 mm; IV, broken. Pronotum: Length 0.6 mm, width at base 1.2 mm. Cuneus: Length 0.72 mm, width at base 0.32 mm (holotype).

General coloration pale yellow tending to lutescent; eyes reddish brown, segment II of antenna towards apex and segments III-IV fuscous; scutellum with a fuscous longitudinal median diluted spot; apical area of clavus castaneous (except at the commissure and extreme apex); hemelytra noticeably lighter at basal third, the remaining tending to light brown, slightly darker on endocorium contiguous to claval spot (in one specimen the darker area reaches the embolium), membrane translucid, nervure pale yellow. Underside of body and legs pale yellow.

Frons prominent, rounded, fossa of vertex well marked, pubescence of body very short, rostrum reaching hind coxae.

Genitalia: Penis (fig. 127) with two very slender flagella on both sides of the secondary gonopore. Left paramere (fig. 128) strongly curved, apex characteristic. Right paramere (fig. 129) curved subapically, apex pointed and slender.

Female: Similar to male in general aspect and coloration. Cuneus length 0.52 mm, width at base 0.24 mm.

Host plant: Pandanus.

Holotype: male, NEW GUINEA: NE Swart Valley, Karubaka, 1420 m, XI.21.1958, J. L. Gressitt, on *Pandanus*, in the Collection of the Bernice P. Bishop Museum, Honolulu. *Paratype:* female, same data as type.

Differs from *Frontimiris nigrifrons* n.sp. by the color of head and by the less prominent frons.

Harpedona Distant, 1904

Harpedona Distant, Faun. Brit. Ind. Rhync. 2:419; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:104, 1957.

Taivanella Poppius, Arch. Naturg. 80 A (8):57, 1915.

Platypeltocoris Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):16, 1912; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:104, 1957 (n.syn.).

Body short, elongate, densely pilose, smooth. Head wider than long, frons prominent, vertex flat, immarginate; eyes contiguous with pronotum; antenna with segment I about as long as width of vertex, segment II twice as long as I, segments III-IV slender, pubescence short; rostrum reaching the hind coxae.

Pronotum with large and wide calli, fused at middle where there is a deep fossa or pit, reaching lateral margins of disc, collar distinct, well separated from collar which is also well separated from disc giving the impression of three pronotal divisions, hind margin of disc convex; scutellum flat, impressed at base; mesoscutum covered.

Hemelytra with parallel sides, embolium narrow, cuneus slightly longer than wide at base; membrane short, areola large, with apical angle well defined.

Legs short, pilose, femora with long and erect

ventral setae.

Type species of genus: Harpedona marginata Distant, 1904.

This genus has sessil eyes, smooth body and long rostrum. It differs from *Notidius* Hsiao, 1944 and *Maurocoris* Poppius, 1914 by the length of rostrum and other characters. In Papua New Guinea it is a pest of yams (*Dioscorea* species).

Key to Species of Harpedona Distant

1.	Vertex with an ochraceous to pale yellow spot
	verticicolor n.sp.
	Vertex totally black
2.	Corium and pronotum unicolorous, black; pygophore
	without a pointed outgrowth (fig. 136); size larger
	plana (Poppius, 1912)
	Corium castaneous to brown, pronotum black; size
	smaller; pygophore with a typical pointed outgrowth
	marginata Distant, 1904

Harpedona marginata Distant, 1904 (Figs. 130-133)

Harpedona marginata Distant, Faun. Brit. Ind. Rhync. 2:419; id. Carvalho, Arq. Mus. Nac. R. Jan. 44: 105, 1957.

Characterized by its color and by the structure of male genitalia.

Male: Length 3.2 mm, width 1.0 mm. Head: Length 0.2 mm, width 0.6 mm, vertex 0.36 mm. Antenna: Segment I, length 0.2 mm; II, 0.8 mm; HI-VI, broken. Pronotum: Length 0.7 mm, width at base 1.0 mm. Cuneus: Length 0.36 mm, width at base 0.24 mm.

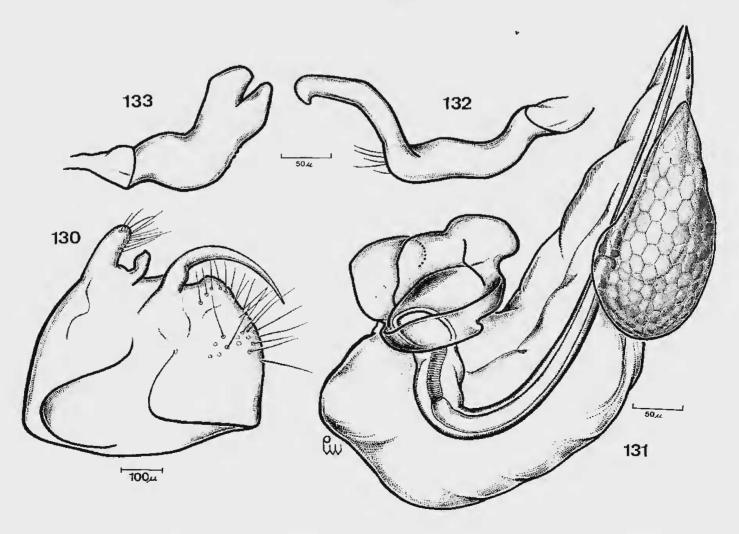
General coloration black with brownish areas; head, pronotum and scutellum black; antennae dark fuscous, segment I pale towards base; hemelytra dark brown to light brown or castaneous, membrane fuscous. Underside of body dark brown, gena, rostrum, coxae and legs pale yellow, hind tibiae darker on two apical thirds.

Body densely pilose, rostrum reaching middle coxae.

Genitalia: Pygophore (fig. 130) with very typical projections, the longer one curved and spine-like. Penis (fig. 131) characteristic as seen in illustration. Left paramere (fig. 132) long, slender and multi-curved. Right paramere (fig. 133) enlarged, with a bifid apex.

Female: Similar to male in general aspect and coloration, vertex 0.40 mm.

Geographical distribution: Sri-Lanka, Manus Island.

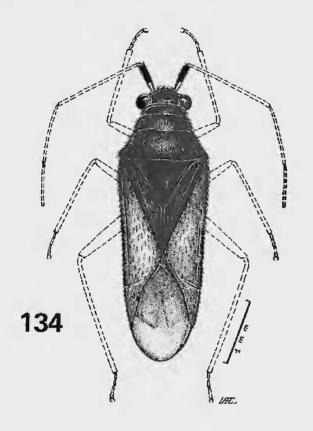


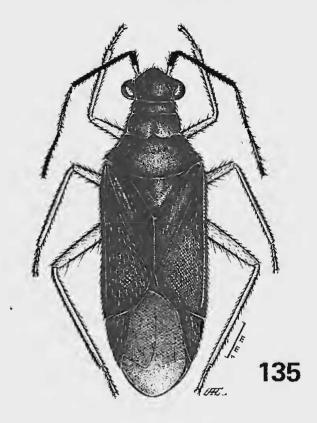
Harpedona marginata Distant - Fig. 130: pygophore; fig. 131: penis; fig. 132: left paramere; fig. 133: right paramere.

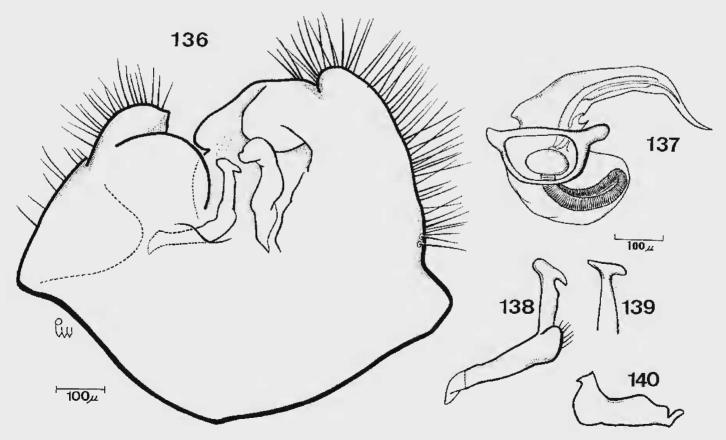
Specimens studied: several males and females, BISMARK ARCHIPELAGUS, Manu Island, Momote, 24.XII.1959, T. C. Maa, in the Collections of the Bernice P. Bishop Museum and of the author.

7

Differs from *Harpedoną plana* (Poppius, 1912) by the color of corium, by the typical projection of pygophore and by the structure of penis and parameres.







Harpedona similis (Poppius) — Fig. 134: male, holotype. Harpedona plana (Poppius) — Fig. 135: male, holotype; fig. 136: pygophore; fig. 137: penis; fig. 138: left paramere; fig. 139: apex of left paramere; fig. 140: right paramere.

Harpedona plana (Poppius, 1912) n. comb. (Figs. 134-140)

Platypeltocoris planus Poppius, Ofv. F. Vet. Soc. Forth. 54 A (30):17; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:119, 1957.

Platypeltocoris similis Poppius, 1912, Ofv. F. Vet. Soc. Forh. 54 A (30):17 (n.svn.).

Characterized by the coloration of the body, by the projection of pygophore and by the structure of penis and parameres.

Male: Length 4.0-5.0 mm, width 1.2-1.4 mm. Head: Length 0.2 mm, width 0.7 mm, vertex 0.34-0.40 mm. Antenna: Segment I, length 0.3-0.4 mm; II, 0.8-1.0 mm; III, 0.5 mm; IV, 0.5 mm. Pronotum: Length 0.5-0.9 mm, width at base 1.1-1.4 mm. Cuneus: Length 0.50 mm, width at base 0.40 mm.

General coloration black, opaque; membrane dark fuscous. Underside of body black, legs (including coxae) and rostrum pale yellow.

Nervure of membrane pilose.

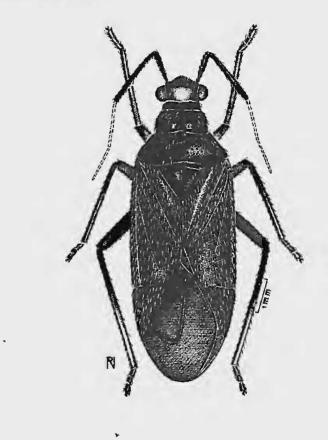
Genitalia: Pygophore (fig. 136) characteristic with outgrowths as seen in figure. Penis (fig. 137) characteristic, as in illustration. Left paramere (figs. 138-139) slender, with a typical apex. Right paramere (fig. 140) smaller, pointed apically.

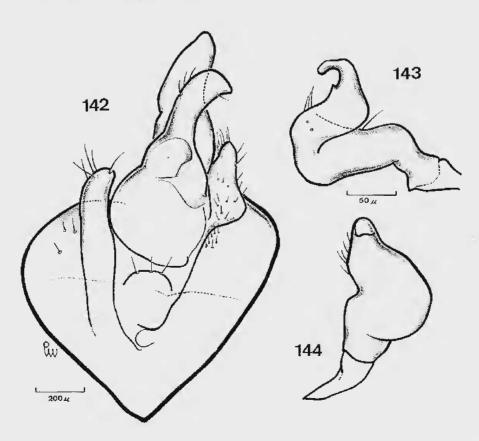
Female: Similar to male in color and general aspect. Host plant: Ipomoea sp.; Discorea alata. Geographical distribution: Papua New Guinea.

Specimens studied: male, holotype, Platypeltocoris similis Poppius, New Guinea, Friedrich-Wilhelmhafen, 26.XII.1900 (Mus. Hung.); male, holotype, Huon-Golf, Sattelberg, 18.IV.1899, Biró. Platypeltocoris planus Poppius, Mus. Hung.); 11 specimens, NEW GUINEA: NE, Markham R. 60 m, 8.VIII.1964, J. Sedlacek; Tsanga, 1200 m, Upper Jimmi V. July 15, 1955, J. L. Gressitt; Morobe Prov. Situm via Lae G. R. Young, 28 April,

1977; Neth. Cyclops Mts. Ifar, 300 m, VI.22,1959, J. L. Gressitt, in the Collection of the Bernice P. Bishop Museum, Honolulu.

Differs from *Harpedona marginata* Distant, 1904 by the projection of pygophore and by the structure of penis and parameres.





Harpedona verticicolor n.sp. - Fig. 141: male, holotype; fig. 142: pygophore; 143: left paramere; fig. 144: right paramere.

Harpedona verticicolor n.sp. (Fig. 141-144)

Characterized by the color of vertex and by the structure of the male genitalia.

Male: Length 4.4 mm, width 1.5 mm. Head: Length 0.4 mm, width 0.7 mm, vertex 0.40 mm. Antenna: Segment I, length 0.3 mm; II, 0.9 mm; III-IV, broken. Pronotum: Length 0.9 mm, width at base 1.3 mm. Cuneus: Length 0.68 mm, width at base 0.32 mm (holotype).

General coloration black; a typical pale yellow to whitish spot on vertex; hemelytra with corium dark brown, embolium and cuneus black, membrane fuscous. Underside of body black, apex of coxae pale, hind femora tending to reddish (female) or black (male), tibiae pale with two basal thirds black.

Eyes small, slightly exserted, calli with a deep fossa between them, disc punctate, embolium thickened, pubescence very short, rostrum reaching beyond hind coxae.

Genitalia: Pygophore (fig. 142) complex, with characteristic outgrowths. Penis broken when dissected. Left paramere (fig. 143) noticeably curved, apex blunt. Right paramere (fig. 144) expanded medially, pointed at apex.

Female: Similar to male in general aspect and coloration.

Holotype: male, PAPUA: Kokoda, Pitoki, 400 m, III.23.1956, J. L. Gressitt, in the Collection of the Bernice P. Bishop Museum, Honolulu. *Paratype:* female, NW Japen I. SSE Sumberbaba, Dawai R. 1.XI.1962, H. Holtman.

Differs from *Harpedona plana* (Poppius, 1912) by the color of vertex and by the structure of the parameres.

Hekista Kirkaldy, 1902

Hekista Kirkaldy, Trans. Ent. Soc. London (2): 248; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:105, 1957. Combalus Distant, Faun. Brit. Ind. Rhync. 2:431, 1904.

Species with body compact, ovoid, pubescence fine and erect, pronotum finely punctulate.

Head wider than long, frons rounded, vertex flat, immarginate; eyes small, placed at middle of head, somewhat removed from collar, this distance being about equal to thickness of first antennal segment; rostrum reaching apex of mesosternum; antenna with segment I longer than width of vertex, distinctly narrower at basal half, segment II more than twice as long as I, segments III-IV slender, pubescence long, length of hairs greater than width of segments.

Pronotum finely punctate, pilose, hind margin of disc widely rounded, lateral margins narrowing towards head, straight, calli small, smooth, collar narrow, distinct; mesosternum covered; scutellum small, flat.

Hemelytra with sides parallel, embolium wide, explanate, cuneus about as long as wide at base, areolar membrane small, nervure rounded apically.

Legs slender, densely pilose.

Type species of genus *Hekista laudator* Kirkaldy, 1902.

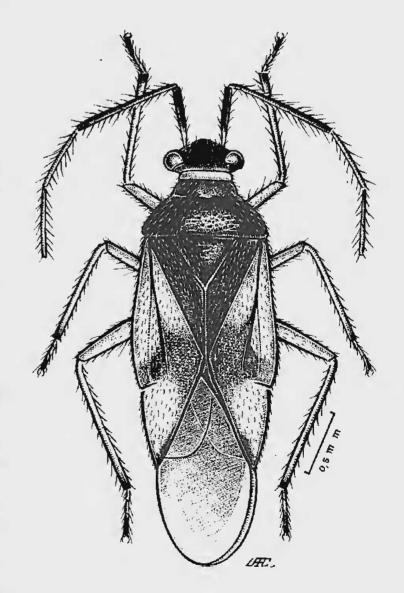
The genus is very close to Bryocoris Fallen, 1829

but differs by having a longer rostrum (reaching the middle coxae) and by the absence of brachypterous females. Differs from *Monalocoris* Dahlbom, 1851 by having the first antennal segment longer than width of vertex, by the sides of hemelytra parallel and by the cuneus noticeably longer than wide at base.

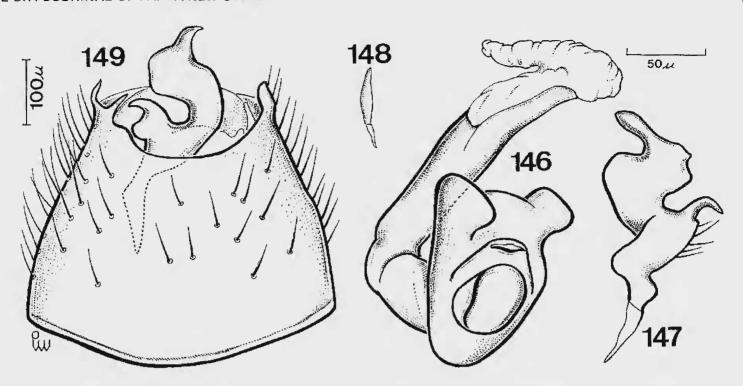
Further studies are needed to clear up relationships of these three genera since they have a common fascies.

Key to Species of Hekista Kirkaldy

- 2 Embolium dark only apically; hind femur with an subapical black ring papuensis n.sp. Embolium dark at apical third; hind femur without a black ring similaris n.sp.



Hekista albicolaris n.sp. - Fig. 145; male, holotype.



Hekista albicolaris n.sp. - Fig. 146; penis; fig. 147; left paramere; fig. 148; right paramere; fig. 149; pygophore.

Hekista albicollaris n.sp. (Figs. 145 - 149)

Characterized by the color of pronotum and by the structure of male genitalia.

Male: Length 2.8 mm, width 1.0 mm. Head: Length 0.2 mm, width 0.4 mm, vertex 0.24 mm. Antenna: Segment I, length 0.4 mm; II, 0.8 mm; III, 0.4 mm; IV, 0.4 mm. Pronotum: Length 0.4 mm, width at base 0.9 mm. Cuneus: Length 0.48 mm, width at base 0.36 mm (holotype).

General coloration black with pale yellow areas; head, pronotum (except whitish collar), scutellum and clavus black; corium and cuneus pale yellow, the first with a transversal irregular spot level with apex of clavus and the second with apex dark brown to black, outer margin of embolium and of cuneus (in some specimens) dark, membrane fuscous; antenna black, base of segment 1 pale. Underside of body black, coxae and legs pale yellow, extreme apex of tibiae and third segment of tarsi black, rostrum pale.

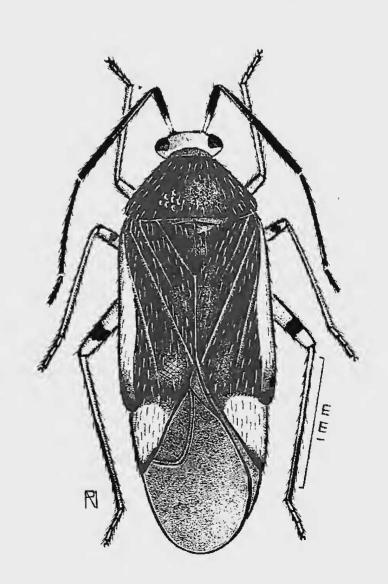
Extrareolar portion of membrane longer than length of cuneus, antenna with long hairs (length increases from segment I to IV), rostrum reaching apex of mesosternum.

Genitalia: Penis (fig. 146) with a large basal plate, vesica totally membranous. Left paramere (fig. 147) with characteristic shape. Right paramere (fig.148) very small. Pygophore (fig. 149) with a typical and branched dorsal appendage.

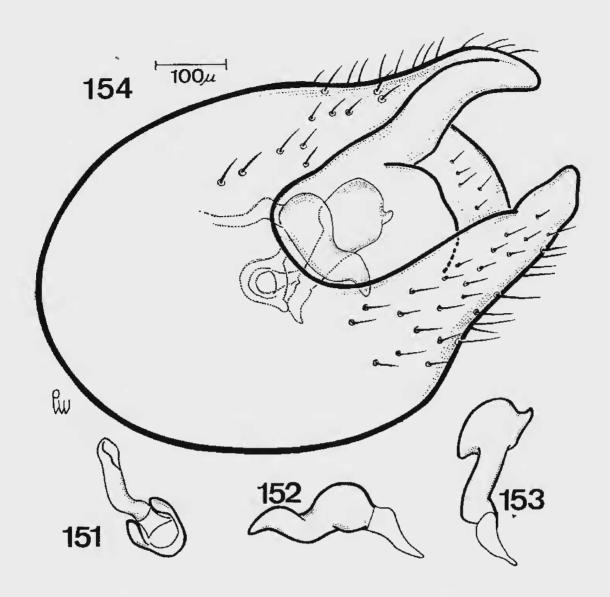
Female: Similar to male in general aspect and coloration. Length 3.2 mm, width 1.2 mm, cuneus length 0.56 mm, width at base 0.48 mm.

Holotype: male, NEW GUINEA: NE Morobe District, Lake Trist, 1600 m, 21-26.XI.1966, C.A. Samuelson, in the Collection of the Bernice P. Bishop Museum. Paratypes: five males and four females, same data as type and NE Ming V. 1700 m, June 23,1957, Elmo Hardy; NE Morobe District, Ulap, 800-1100m, IX.1968, N.L.H. Kraus; NE Daulo Pass, 2400 m (Azaro Chimbu div.), June 15,1955, J. L. Gressitt.

Differs from *Hekista papuensis* n.sp. by the color of the collar and by the structure of male genitalia.



Hekista papuensis n.sp. - Fig. 150; male, holotype.



Hekista papuensis n.sp. - Fig. 151; penis; fig. 152; left paramere; fig. 153; right paramere; fig. 154; pygophore.

Hekista papuensis n.sp. (Figs. 150-154)

Characterized by the coloration of the body and by the structure of male genitalia.

Male: Length 4.0 mm, width 1.2 mm. Head: Length 0.1 mm, width 0.5 mm, vertex 0.28 mm. Antenna: Segment I, length 0.4 mm; II, 0.7 mm; III, 0.4 mm; IV, 0.2 mm. Pronotum: Length 0.6 mm, width 1.1 mm. Cuneus: Length 0.48 mm, width at base 0.24 mm (holotype).

General coloration black with pale yellow areas; head ochraceous, clypeus, middle of frons, eyes and antennae black, narrow portion of segment I pale (in some specimens the base of segment II is also pale); pronotum and scutellum black, shining; clavus dark castaneous, membrane fuscous, embolium and cuneus pale yellow, outer margin and apex of embolium, and apex of cuneus black. Underside of body black, coxae and legs pale yellow, femora with a subapical black ring.

Pubescence of antenna increasing in length from base of segment II, membrane with short hairs.

Genitalia: Penis (fig. 151) simple and small. Left paramere (fig. 152) characteristic, enlarged near apex. Right paramere (fig. 153) as seen in illustration. Pygo-

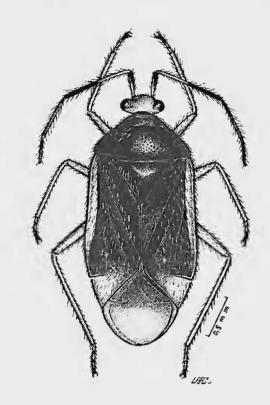
phore (fig. 154) with two appendages as in figure.

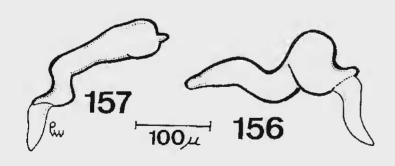
Female: Similar to male,. Length 3.8 mm, width 1.3 mm, cuneus length 0.60 mm, width at base 0.28 mm.

Holotype: male, NEW GUINEA: NE Wau, 1200-1500 m, IX.2.1968, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratypes: 30 males and 36 females, NE Daulo Pass area, 2500 m, VIII.4.57, Elmo Hardy; NE Guaraina, 800 m, 16.I.68, J.&M. Sedlacek; NE Mt. Hagen area, 1650 m, VI.28, 57, Elmo Hardy; NE West Highlands, Tomba, 2500 - 2560 m, 24.V.63, J. Sedlacek; Mt. Wilhelm, 300 m, July 4,1955, J.L. Gressitt NE Tongai, 10 Km E Mt. Albert Eduard, 1800-1850 m, J. Sedlacek; NE Swart Val. Karubaka, 1400 m, XI.21.1958, J.L. Gressitt; Papua, W. Highlands, IX.8-13, 59, T. C. Maa; NE Wau, Morobe District, Mt. Missim, 1600 m, 18.11.66, J.L. Gressitt; NE Moife, 2100 m, 7-14-X.59, T. C. Maa; NE East Highlands, Aiyra, 1650 m 6.1.65, R. Straatmann; SW Mt. Giluwe, 2550 m, J. Sedlacek; Papua, Kokoda, Pitoki, 400 m, III.23.56, J.L. Gressitt; Papua, Owen Stanley Range, Goilala, 1950 m, III.16-31,58; NW Vogelkop, Sarurai SW Lake Anggi Giji, 2000.2200 m, 4-5.111.63, R. Straatman; Neth. Wisselmeren, Okaitadi, 1800 m, Aug.8,55; Mt. Otto, 2200 m, June, 23,55, J. L. Gressitt; NE Mt. Hangen area, 1650 m. VI.28,57; NE Karimui, S. Goroka, 1000 m, 2. VI.61, J.

L. Gressitt; NE Kepilam, 2400 m, 2-23.VI.63, J. Sedlacek; NE Kassam Pass, 1550 m, 14-20.XI.67, P. Colman; NE Mt. Piora, 2100-2800 m, 11-14.VI.66, J. L. Gressitt, NE Tifalmin, 1400 m, 21.VIII.63, R. Straatman; NE Morobe Dist. Mt. Kaindi N Peak, 2350 m, 14-20.X.66, G.A. Samuelson; SE Murray Pass, Waitape, 2800-2900 m, 11.XI.65, J. & M. Sedlacek; Papua, Tapini, 800-1100 m, XI.68; NEW BRITAIN: Vumabakan, 180 m, 10 km E Keravat, Nov. 16.20,59, T. C. Maa.

Differs from *Hekista albicollaris* n.sp. by the color of head and collar and by the structure of male genitalia.





Hekista similaris n.sp. — Fig. 155: male, holotype; fig. 156: left paramere; fig. 157: right paramere.

Hekista similaris n.sp. (Figs. 155-157)

Characterized by the color of head, corium and femur and by the structure of male genitalia.

Male: Length 3.3 mm, width 1.2 mm. Head: Length 0.2 mm, width 0.4 mm, vertex 0.20 mm. Antenna: Segment I, length 0.2 mm; II, 0.8 mm; III, 0.7 mm; IV, 0.2 mm. Pronotum: Length 0.4 mm, width at base 1.0 mm. Cuneus: Length 0.48 mm, width at base 0.36 mm (holotype).

General coloration black, shining, with pale areas; head ochraceous, eyes and clypeus dark brown, antenna chestnut, segment I and II pale towards base; pronotum, scutellum and clavus black to dark brown, shining; corium and apex of embolium subapically dark brown (outer apical portion of embolium pale); cuneus and embolium ochraceous, membrane fuscous. Underside of body chestnut, rostrum, coxae, legs and pygophore pale yellow, segment III of tarsus fuscous.

Genitalia: Penis and pygophore similar to Hekista papuensis n.sp. Left paramere (fig. 156) blunt apically, with a small median tubercle. Right paramere (fig. 157) with more than one curvature, as seen in figure.

Female: Similar to male in general aspect and coloration, cuneus length 0.36 mm, width at base 0.32 mm.

Holotype: male, NEW GUINEA: NE Goroka, Kabole, 1800 m, VII.25.55, J. L. Gressitt, in the Colection of the Bernice P. Bishop Museum, Honolulu. Paratypes: 27 males and 40 females; NE Tatibu, 2000-2400 m, Gressitt-Maa; NE Okapa, 1900 m, 3.VI.67, G. A. Samuelson; NE Mt. Piora, 2000 m, 12.VI.66, J. L. Gressitt; NE Goroka, Kabele, 1800 m, VI.24.55, J. L. Gressitt; Neth. S. Highlands, Dimifa SE Mt. Giluwe, 2200 m, X.10.58; SE 8 km W Menoi, 2150 m, 5-12.XII.67, P. Kolman; NE Mt. Otto, 2200 m, June 23,55, J. L. Gressitt; SE Koroba, 40 km W Tari, 1650 m, 19.1X.63; E above Aiyura, 1740 m, 5.VI.67, G. A. Samuelson; NE Papua S Highlands, N of Mendi, 1800 m, Oct. 8,58, J. L. Gressitt; NE Daulo Pass, 2400 m, (Asaro-Chimbu div.), June 15,55; NE Barapa Sawmill, 13 km NNW Kaivantu, 2200-2400 m, 8.1.65, R. Straatman; NE Wau, Edie Creek, 1200-2200 m, 23.XI.63; NE East Highlands Aiyura, 1900 m, 9.1.64, J. Sedlacek; NE Mt Kaindi, 2100-2350 m, 1.1.65; Mt. Missim, 1800 m, 7.1.60, J. & M. Sedlacek; Neth. Warus S of Hollandia, 450-500 m; Wau, Nami Creek, 1700 m, 17.V.65, J. Sedlacek; in the Collections of the B. P. Bishop Museum and of the author.

Differs from *Hekista papuensis* n.sp. by lack of a black ring on the femora, by the color of corium, apex of cuneus and by the structure of male genitalia.

Hemisphaerocoris Poppius, 1912

Hemisphaerocoris Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):25.

Body glabrous, shining, short and wide, strongly rounded, hemispherical at corial level. Head vertical, short, wider than long, seen from side higher than long, vertex strongly marginated, slightly sulcate longitudinally, clypeus not prominent, eyes large, exserted, contiguous with pronotum; rostrum reaching middle coxae; antenna slender, long, segment I short, segment II slightly longer than I, incrassate towards apex, pubescence short.

Pronotum very wide, hind margin slightly rounded, lateral margins not carinate, disc prominent, strongly punctate, calli flat, small, fused at middle, collar absent, scutellum prominent, smooth.

Hemelytra longer than the body, lateral margins strongly rounded, hemispherical, cuneal fracture deep, clavus and corium smooth, embolium wide, narrowed beyond middle, with a row of punctures, cuneus short, slightly longer than wide at base, membrane translucid, areola rounded apically.

Hind legs strong and curved, pulvillus large.

Type species of genus: Hemisphaerocoris puncticollis Poppius, 1912.

According POPPIUS (1912) this genus approaches Monalocoris Dahlbom, 1851 but didfers by the strongly rounded body and coarsely punctate pronotum.

Hemisphaerocoris puncticollis Poppius, 1912

Hemisphaerocoris puncticollis Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):25.

This species was not seem by the author. According POPPIUS its color is dark brown, pronotum darker, mesosternum, ostiolar peritreme, antenna and hind legs pale yellow, segment II of antenna dark brown with basal third pale yellow, membrane pale, cuneus brown.

Segment I of antenna about as long as vertex, segment II about three times as long as I. Length 2.5 mm, width 1.5 mm (male).

New Guinea; Bujakori.

Monalocoris Dahlbom, 1851

Monalocoris Dahlbom, K. Sv. Akad. Hand. :209; id. Fieber, Eur. Hem. :61, 237, 1861; id. Douglas & Scott, Brit. Hem. :278, 1865; id. Reuter, Rev. Crit. Caps. 1:84; 2:79, 1875; id. Wagner, in Gulde, Wanz. Mitteleur. 10:286, 1945,

Sthenarusoides Distant, Trans. Linn. Soc. Lond. 16:183, 1913.

Sthenaroides Bergroth, Rev. Zool. Bot. Afr. 10(1): 51, 1922.

Siporia Poppius, Phil. Jour. Sci. 10(1):87, 1915.

Small compact species with short oval and convex boy, densely and shortly pubescent. Head wider than long, frons rounded, vertex immarginate, eves contiguous with pronotum; rostrum reaching the middle coxae; antennae short, segment I shorter than the width of vertex, densely pilose.

Pronotum finely punctured, hind margin of disc straight, lateral margins rounded, narrowing towards head, collar distinct, calli obsolete; scutellum small, flat.

Hemiptera noticeably rounded at level of corial commissure, embolium wide, explanate, cuneus about as long as wide at base, cuneal fracture deep, membrane short, areola with nervure rounded apically.

Legs short, densely pubescent.

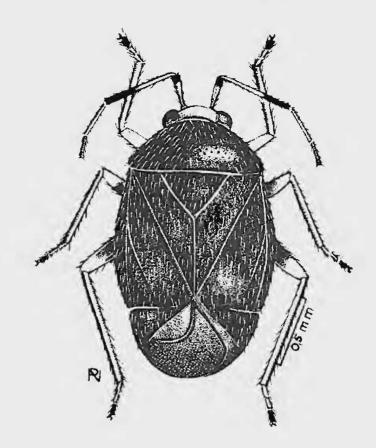
Type species of genus: Monalocoris filicis Lin-

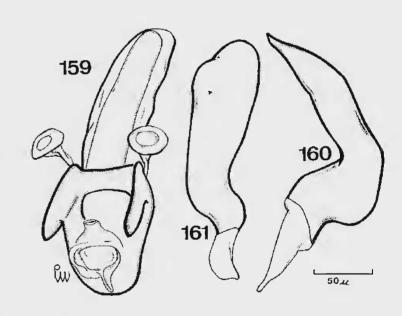
neaeus, 1758).

Differs from Bryocoris Fallen, 1829 by the length of rostrum, by the length of cuneus and absence of brachypterous females. Differs from Hekista Kirkaldy, 1902 by the length of cuneus and lenght of first antennal segment.

Key to Species of Monalocoris Dahlbom

1. Upper part of body, except head, totally black; middle and hing femora (except apex) black Body with at least embolium and or humeral angles pale; all femora pale or ochraceous pallipes n.sp.





Monalocoris nigrus n.sp. - Fig. 158: male, holotype; fig. 159: penis; fig. 160: left paramere; fig. 161: right paramere.

Monalocoris nigrus n.sp. (Figs. 158-161)

Characterized by the color of body and by the structure of the male genitalia.

Male: Length 2.3 mm, width 1.2 mm. Head: Length 0.2 mm, width 0.5 mm, vertex 0.24 mm. Antenna: Segment 1, length 0.2 mm; 11, 0.7 mm; 111, 0.4 mm; IV, 0.2 mm. Pronotum: Length 0.6 mm, width at base 1.0 mm. Cuneus: Length 0.40 mm, width at base 0.24 mm (holotype).

General coloration shining black with pale yellow areas; head (except black clypeus). Segment I of antenna (except black apical portion), two thirds to half of segment II (except dark apex) pale yellow; membrane fuscous, paler apically. Underside of body dark castaneous, rostrum (except dark apex), anterior femora, apices of middle and hind femora, tibiae pale yellow, apices of tarsi fuscous.

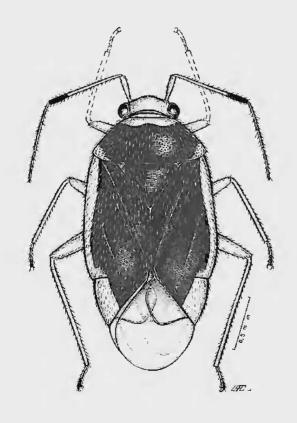
Body minutely punctate, dense, finely and erectly pilose, including membrane; cuneal fracture wide and deep, cuneus rounded externally, eyes distant from pronotum by a espace equal to thickness of first antennal segment which is narrowed at basal third, collar well marked, rostrum short, reaching the middle of mesosternum.

Genitalia: Penis (fig. 159) with a large basal plate. Left paramere (fig. 160) curved and pointed. Right paramere (fig. 161) enlarged and blunt apically.

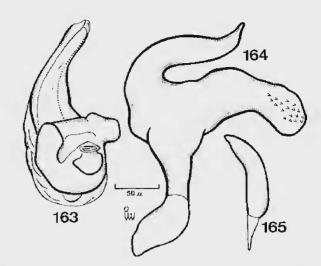
Female: Similar to male in general aspect and coloration.

Holotype: male, NEW GUINEA: NE Karimui, South of Goroka, 1000 m, 3.V1.1961, J. L. & Gressitt, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratypes: six males and fifteen females, NE Morobe District, Ulap, 800-1100 m, IX.68; Neth. Vogelkop, Fak Fak, S coast Bomberai, 10-100 m, VI.3.59, T. C. Maa; NE Amok, 165 m, Ja. 6,60, T. C. Maa; NE Busu R, E. of Lae, 100 m, Sept. 13,55, J. L. Gressitt; NE Wau; NE Bulolo, 730 m, Aug. 19,56; NE Karimui, S Goroka, 1000 m, 3.VI.61; Papua, Owen Stanley Range, Goirala; Tapini, 975 m, XI.16-25.57, W. W. Brandt; Wau, Hospital Crk, 1200 m, 6.IV.65, J. Sedlacek; Feramin, 1500 m, 26.VIII.63, R. Straatman; NE Adelbert Mts. Wanuma, 800-1000 m, X.26.58, J. L. Gressitt; West New Guinea, Central Mts. Archbold Lake, 760 m, 26.XI-3.XII.61; NE Korop, Upper Jimmi V. 1300 m, VII.12.55, J. L. Gressitt.

Differs from *Monalocoris pallipes* n.sp. by the color of legs and by the structure of male genitalia.



Monalocoris pallipes n.sp. - Fig. 162; male, holotype.



Monalocoris pallipes n.sp. — Fig. 163: penis; fig. 164: left paramere; fig. 165: right paramere.

Monalocoris pallipes n.sp. (Figs. 162-165)

Characterized by the color of legs and by the structure of male genitalia.

Male: Length 2.6 mm, width 1.4 mm. Head: Length 0.1 mm, width 0.5 mm, vertex 0.36 mm. Antenna; Segment I, length 0.2 mm; II, 0.7 mm; III, 0.3 mm; IV, 0.2 mm. Pronotum: Length 0.5 mm, width at base 1.2 mm. Cuneus: Length 0.40 mm, width at base 0.40 mm.

General coloration dark brown with pale yellow to ochraceous areas; head and antennae ochraceous, apex of segment II, segments III and IV brown to black; pronotum dark brown, areas of calli and humeral angles pale yellow; scutellum, clavus and corium dark brown, embolium pale yellow; cuneus pale, inner basal angle brown; base of membrane and nervures fuscous, apical portion pale. Underside of body dark brown, coxae and legs pale yellow, tarsi fuscous apically.

Body densely pubescent, shining, pronotum punctate, scutellum rugouse, rostrum reaching middle coxae.

Genitalia: Penis (fig. 163) with large basal plate. Left paramere (fig. 164) large, branched, the wider arm with minute sclerotized tubercles, the narrow arm pointed. Right paramere (fig. 165) small, simple.

Female: Similar to male in general aspect, color and size.

Holotype: male, NEW GUINEA: NE Central District Guar'I, 1900-2100 m, X.1968, N. L. H. Krauss, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratypes: nine males and eighteen females, NE Central District Guar'I, 1900-2100 m, X.68, N. L. H. Krauss; Morobe District, Ulap, 800-1100 m, IX.68, N. L. H. Krauss; NE Tapo, 1650 m, 35 km NW Kainantu, X.59, T. C. Maa; NE Wau, Kunai Ck. 1200-1250 m, 15.V.65, J. Sedlacek; WEST, Bokondini, 40 km N Balien Val. 1300 m, 16-23.XI.61, L. W. Quate; NEW BRITAIN: Keravat, 0-100 m, 15.X.68, N. L. H. Krauss.

This species varies in color: some specimens tend to be whole black on pronotum; other only at middle of disc or with hemelytra dark brown; other are totally ochraceous.

Differs from *Monalocoris nigrus* n.sp. by the color of legs and pronotum, as well as, by the structure of male genitalia.

Nabirecoris n.gen.

Species of small size, body short, rounded, compact, shortly pubescent. Head inclined forwards, frons rounded, vertex smooth, marginate; eyes large, contiguous with pronotum; clypeus prominent, convex, jugum large, gula short; rostrum with segment I reaching front coxae, remaining segments covered (carded); antenna short and slender, segment I shorter than half the width of vertex, segment II shorter than width of head, pubescence short.

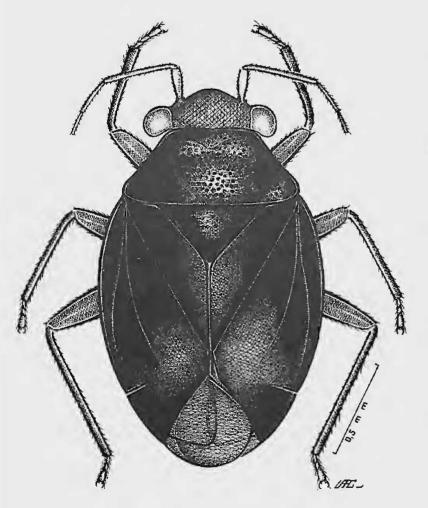
Pronotum punctate, shining, calli flat with a V-like depression between them, lateral margins slightly concave anteriorly, hind margin straigth, humeral angles prominent; scutellum flat.

Hemelytra opaque, rounded laterally, embolium much wider sub-basally, cuneus wide, about twice as long as wide at base, membrane very short with its distal margin in level with apex of cuneus, areola elongate.

Legs short, femora large and thick, claws and pulvilli of the Bryocorini type.

Type species of genus: Nabirecoris minutus n.sp.

This genus has the fascies of *Sixeonotus* Reuter, 1875 but differs by the very short membrane and delicate antenna. It has also resemblance with *Halticotoma* Reuter, 1913 but do not have a prong on left dorsal side of pygophore.



Nabirecoris minutus n.sp. - Fig. 166: female, holotype.

Nabirecoris minutus n.sp. (Fig. 166)

Characterized by the coloration of body and by its small size.

Female: Length 1.9 mm, width 1.1 mm. Head: Length 0.2 mm, width 0.6 mm, vertex 0.36 mm. Antenna: Segment I, length 0.1 mm; II, 0.3 mm; III-VI, broken. Pronotum: Length 0.4 mm, width at base 0.9 mm. Cuneus: Length 0.36 mm, width at base 0.16 mm (holotype).

General coloration black; antenna pale yellow, eyes reddish brown, head brown; pronotum shining black; scutellum and hemelytra opaque, dark brown to black; membrane fuscous, apical portion pale. Underside of body black; jugum and lorum light brown.

Male: Unknown.

Holotype: female, NEW GUINEA: NW Nabire, S. Geelvink Bay, 0-30 m, 2-9.VII.1962, J. L. Gressitt & J. Sedlacek (light trap), in the Collection of the Bernice P. Bishop Museum, Honolulu.

This is the smallest species of mirid studied so far from New Guinea.

Palaeofurius Poppius, 1912

Palaeofurius Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):19; Neofurius Carvalho nec Distant, An. Acad. Brasil. Ci. 24(1):54, 1952; Eccritotarsus Carvalho nec Stäl, Arq. Mus. Nac. R. Jan. 44:100, 1957.

Body elongate oval, fine and erectly pubescent. Head small, noticeably wider than long, smooth, eyes bordering pronotum, prominent, clypeus curved, large, side of head noticeably high, jugum and lorum large, gula short; rostrum reaching the middle coxae; antenna fairly short, segment I shorter than width of vertex, segment II about twice as long as I, segments III-IV slender, pubescence about as long as thickness of segments.

Pronotum strongly punctate, calli small, low, reaching lateral margins, collar-like area large, with mesal length about as long as length of eye, lateral margins constricted behind calli, rounded, disc strongly convex, posterior margin truncate, humeral angles rounded; mesoscutum covered, scutellum small, flat.

Hemelytra elongate, smooth, embolium thickned with long hairs, cuneus long and large, areola and membrane long. Legs short and thick, densely pubescent.

Type species of genus: *Palaeofurius sagittatus* Poppius, 1912.

This genus has a strong resemblance with *Neolurius* Distant, 1894 and *Eccritotarsus* Stäl, 1860. The longer rostrum and the length of segment III of antenna as long as III permits to separate from the above genera. Treated as synonym (CARVALHO, 1952, 1957) it is now reinstated as an independent generic taxon.

Key to Species of Palaeofurius Poppius

Palaeofurius cyclopensis n.sp. (Figs. 167-170)

Characterized by the coloration of the body and by the structure of male genitalia.

Male: Length 2.8 mm, width 1.1 mm. Head: Length 0.1 mm, width 0.5 mm, vertex 0.32 mm. Antenna: Segment I, length 0.2 mm; II, 0.4 mm; III-IV, broken. Pronotum: Length 0.7 mm, width at base 0.9 mm. Cuneus: Length 0.56 mm, width at base 0.32 mm.

General coloration pale yellow with castaneous do dark areas; eyes, apex of segment II of antenna, segments III-IV black; disc of pronotum (except anterior portion of calli), scutellum, clavus (except external margins which is narrowly translucid) and transverse

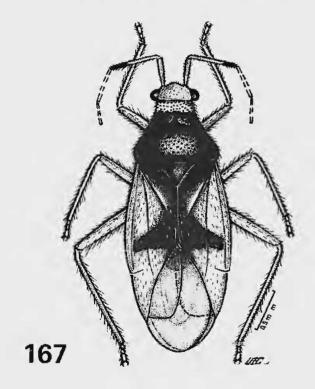
fascia of corium (not reaching embolium and enlarging towards commissure) castaneous to dark; hemelytra translucid. Underside of body and legs pale yellow, propleura, mesosternum, meso and metapleura dark castaneous.

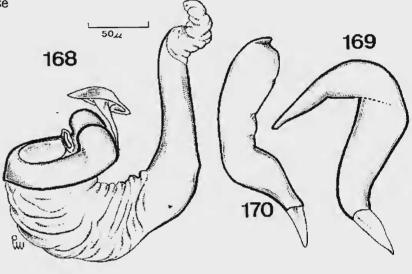
Genitalia: Penis (fig. 168) with membranous vesica. Left paramere (fig. 169) curved and pointed. Right paramere (fig. 170) enlarged apically, ended by a small pointed tubercle.

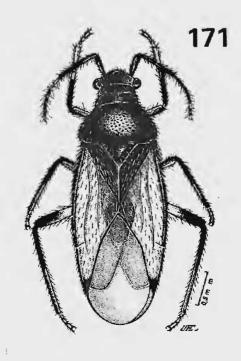
Female: Similar to male in general aspect and coloration.

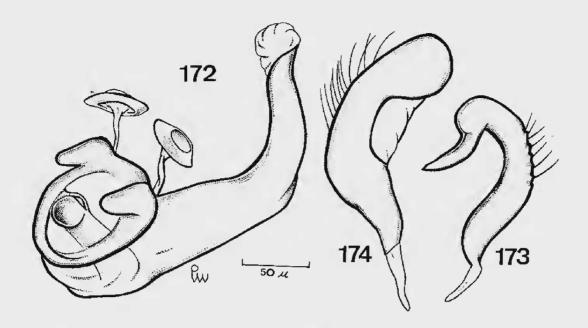
Holotype: male, NEW GUINEA: Neth. Cyclops Mts. Ifar, 300 m, II.21.1959, T. C. Maa, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratypes: two males and seven females, same data as type.

Differs from *Palaeofurius nigroemboliatus* n.sp. by the coloration of the body and by the structure of the male genitalia.









Palaeofurius nigroemboliatus n.sp. - Fig. 172: penis; fig. 173: left paramere; fig. 174: right paramere.

Palaeofurius nigroemboliatus n.sp. (Figs. 171-174)

Characterized by the coloration of the embolium and by the structure of male genitalia.

Male: Length 3.5 mm, width 1.3 mm. Head: Length 0.2 mm, width 0.6 mm, vertex 0.32 mm. Antenna: Segment I, length 0.2 mm; II, 0.6 mm; III-IV, broken. Pronotum: Length 0.8 mm, width at base 1.1 mm. Cuneus: Length 0.60 mm, width at base 0.36 mm.

General coloration black to dark brown with pale yellow areas; eyes brown, head, antenna, pronotum scutellum and clavus, a spot at corial commissure, embolium and apex of cuneus black; membrane fuscous, intrareolar area darker. Underside of body dark brown, coxae and basal portion of femora pale yellow.

Rostrum reaching middle of mesosternum, pronotum distinctly punctate, body with long, fine, erect pubescence, embolium incrassate, hemelytra narrowed at base, cuneus twice as long as wide at base.

Genitalia: Penis (fig. 172) with membranous vesica. Left paramere (fig. 173) strongly curved, pointed apically. Right paramere (fig. 174) large, rounded apically.

Female: Similar to male in general aspect and coloration. Cuneus length 0.64 mm, width at base 0.28 mm.

Holotype: male, NEW GUINEA: Neth. Waris S of Hollandia, 450-500 m, VIII.24-31.1959, T. C. Maa, in the Collection of the Bernice P. Bishop Museum, Honolulu. *Paratypes:* one male and one female, same data as type

Differs from *Palaeofurius cyclopensis* n.sp. by the totally black pronotum and clavus.

Palaeofurius sagittatus Poppius, 1912

Palaeofurius sagittatus Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):19; Neofurius sagittatus Carvalho, An. Acad. Brasil. Ci. 24(1):54, 1952; Eccritotarsus sagittatus Carvalho, Arq. Mus. Nac. R. Jan. 44:100, 1957.

According POPPIUS the species is whitish pale yellow, eyes and scutellum black, inner half and apex

of clavus, a large rounded spot on corial commissure and inner base of membrane dark brown, these color markings forming a pillar-like figure, rarely the whole upper surface pale yellow (var. *unicolor*), antenna brown. Length 3.5 mm, width 1.0 mm. New Guinea: Moroka, 1300 m, VII-XI.1893, Loria (Mus. Genova et Helsinki).

The type of this species was not available for study and the author did not find specimens among the present collection.

Prodromopsis Poppius, 1912

Prodromopsis Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):4; id. Carvalho, Rev. Brasil. Biol. 8(2):191, 1948 (as synonym of Sinervus Stäl); id. Carvalho, Arq. Mus. Nac. R. Jan. 44:124, 1957.

Species with body elongate, almost glabrous. Head wider than long, frons rounded, vertex immarginate; eyes peduculate, raised uppwards, with indentate inner margin; segment I of antenna noticeably narrower on basal third or fourth, segments III-IV cylindrical, slender, with short and fine pubescence; rostrum reaching apex of mesosternum to middle coxae.

Pronotum distinctly punctate, constricted and narrowed anteriorly, calli fused and reaching sides of disc, hind margin slightly convex, humeral angles rounded, lateral margins distinctly sinuate behind calli; scutellum flat, mesoscutum covered.

Hemelytra finely punctulate, embolium narrow, cuneus very long, reaching apex of membrane, curved, membrane surrounded by cuneus, areola long, nervures parallel, diverging only apically.

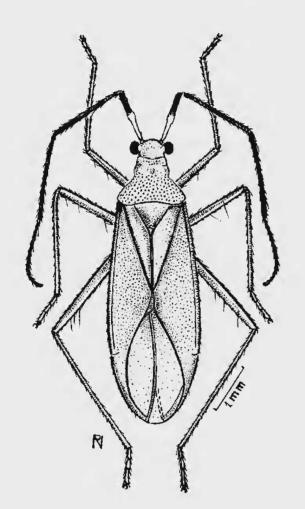
Legs long and slender, with short pubescence, femora with a few and slender setae on ventral side.

Type species of genus: *Prodromopsis cuneatus* (Distant, 1909).

This genus is very near *Sinervus* Stäl, 1860 with which CARVALHO (1959) has synonymized. The eyes however are less pedunculate, the anterior margin of collar somewhat convex, the hind margin of disc also slightly convex and the cuneus less narrowed than in *Sinervus*. From *Prodromus* Distant, 1904 differs by the

much longer cuneus and by the more pedunculate eyes. Due to the above mentioned characters the author prefers to reinstate the genus as a valid taxon.

Key to Species of Prodromopsis Poppius



Prodromopsis oculatus Poppius, 1912 (Figs. 175-178)

Prodromopsis oculatus Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):10; Sinervus oculatus Carvalho, Rev. Brasil. Biol. 8(2):191, 1948; id. Arq. Mus. Nac. R. Jan. 44:124, 1957.

Characterized by the noticeably pedunculate and erect eyes, by the color of antenna and by the structure of male genitalia.

Male: Length 5.8 mm, width 1.8 mm. Head: Length 0.4 mm, width 0.8 mm, vertex 0.40 mm. Antenna: Segment I, length 0.8 mm; II, 1.5 mm; III, 1.5 mm; IV, 1.6 mm. Pronotum: Length 0.8 mm, width at base 1.3 mm. Cuneus: Length 1.40 mm, width at base 0.40 mm.

General coloration pale yellow to ochraceous; eyes, first antennal segment beggining at end of narrowed portion, segments III-IV black to fuscous; disc of pronotum in some specimens (male) with a fleshy color, claval commissure (male) in some specimens reddish to orange; corium and cuneus light pale yellow to greenish; clypeus and parameres dark fuscous. Underside of body and legs pale yellow.

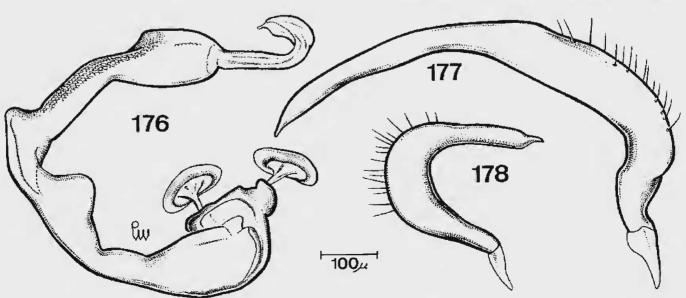
Eyes strongly pedunculate, raised upwards, inner margin with an indentation, segment I of antenna noticeably narrowed on basal third, pronotum coarsely punctate, hemelytra finely punctulate, rostrum reaching about apex of mesosternum.

Genitalia: Penis (fig. 176) characteristic, as seen in figure. Left paramere (fig. 177) long, slender, narrowing towards apex. Right paramere (178) smaller, strongly curved.

Female: Similar to male in general aspect but with slight differences in coloration.

Geographical distribution: Papua New Guinea, Solomon Islands, New Britain.

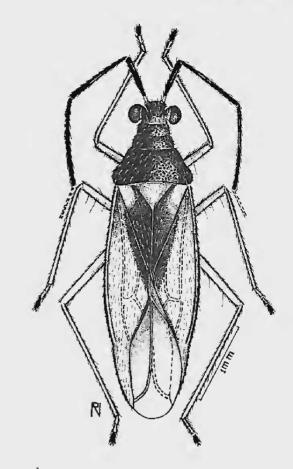
Specimens studied: male, lectotype (new designation), New Guinea, Astrolabe Bai, Erima, Biró (Mus. Hung); Ighibirei, VII-VIII.1890; Mt. Astrolabe, II.1893, Loria (Mus. Genova et Helsingfors); several males and females: SOLOMON ISLANDS: Florida Grp. Gairava, M'boli passage, Big Nggela, 13.IX.60, C. W. O'Brien; Guadacanal, Tambalia, 30 km W Honiara, 28.V.64, R. Straatman; Santa Ysabel, Sukapisu, 900 m, 19.VI.60,

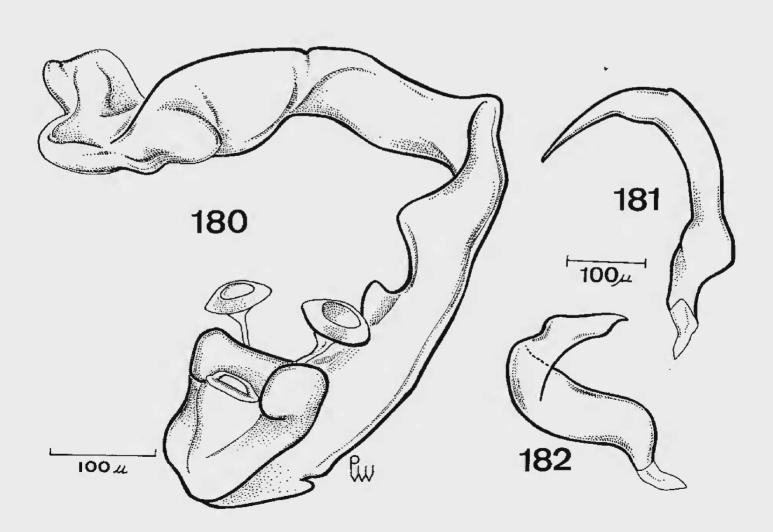


Prodromopsis oculatus Poppius - Fig. 175: male, lectotype; fig. 176: penis; fig. 177: left paramere; fig. 178: right paramere.

C. W. O'Brien; Tatamba, 0-50 m, 6.1X.64, R. Straatman; Vella Lavella, Ulo Crater, 10 m, 20.XII.63, P. Shanahan; NEW BRITAIN: Malmaluvan-Vunaka-nau, Gazelle Pen. V.11-13.56, J. L. Gressitt; Gaulim, 140 m, 21-27.X.62, J. Sedlacek; NEW GUINEA: NW Japen I. SSE Sumberbaba, Dawai R. 29.X.62, H. Holtmann; Vogelkop, Danawaria, June 2,59 (banana), J. L. Gressitt; Waris, S of Hollandia, 450-500 m, VIII.16-23.59, T. C. Maa; NE Finisterre Range, Saidor, Gabumi VIII. VII.21.58, W. W. Brandt; Tuwep, Dalawaket Range, 1350 m, IX.9.56, E. J. Ford; NE Tsenga 1200 m, Upper Jimmi, V.14,55, J. L. Gressitt; Aransbari, NW Gulvink Bay, 10.II.63, R. Straatman; Vogelkop, Kebar Val. W of Manokwari, 550 m, 4-31.1.62, W. Quate; Morobe Dist. Kilolo Ck. 1070 m, 7 km W Wau, 15-25.VIII.1967; Papua, Kokoda-Pitoki, 450 m, III.24.56, J. L. Gressitt; Korop, Upper Jimmi, VII.12.55, J. L. Gressitt; Boden, July 16,59, T. C. Maa; Busu R. E Lae, 100 m, Sept. 15,55, J. L. Gressitt; Vogelkop Fak Fak, Agr. Exp. Sta. 11.VI.59, J. L. Gressitt; Boden, 100 m, 11 km SE Oerbefaren, 16.XII. 59, T. C. Maa; River Tor (mouth), 4 km E Hollandia, Maggen, 19.VII.59, T. C. Maa; Hollandia, Binnen, 100 m, XI,24.58, J. L. Gressitt.

Differs from *Prodromopsis nigrus* n. sp. by the color of the body.





Prodromopsis nigrus n.sp. (Figs. 179-182)

Characterized by the dark color and by the structure of the male genitalia.

Male: Length 3.8 mm, width 1.2 mm. Head: Length 0.2 mm, width 0.7 mm, vertex 0.28 mm. Antenna: Segment I, length 0.4 mm; II, 0.8 mm; III, 1.4 mm; IV, broken. Pronotum: Length 0.8 mm, width at base 0.9 mm. Cuneus: Length 0.80 mm, width at base 0.16 mm (holotype).

General coloration black with pale translucent areas; head, antenna, pronotum, scutellum and clavus (except externally at base) black; portion of endocorium bordering clavus, corial commissure, outer margin of embolium and of cuneus, inner apical margin of corium and nervures of membrane fuscous to black; corium, cuneus and membrane translucent. Underside of body dark brown to black, a spot on mesosternum laterally, a spot on metapleura, segment II and segment VII of abdomen laterally orange color; rostrum (except black apex), apices of coxae and legs pale yellow, apices of tarsi black. In some specimens the abdomen is orange to pumpkin color.

Eyes pedunculate, raised upwards, indentate at innder posterior margin, segment I of antenna narrowed at basal fourth, with long, erect hairs about as long as thickness of segment, second segment also with long hairs, rostrum reaching apex of first coxae.

Genitalia: Penis (fig. 180) characteristic, as seem in figure. Left paramere (fig. 181) slender and curved, pointed apically. Right paramere (fig. 182) curved beyond middle, pointed apically.

Female: Unknown.

Holotype: male, NEW GUINEA: Neth. Waris, SE Hollandia, 450-500 m, VIII.24-31,1959, T. C. Maa, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratype: male, SW Vogelkop, Fak Fak, Agric. Exp. Sta. 11.VI.1959, J. L. Gressitt (light trap).

Differs from *Prodromopsis oculatus* Poppius, 1912 by the color of the body and by the structure of the male genitalia.

Stenopterocorisca n.gen.

Species with body elongate, parallel side, with short and fine pubescence. Head vertical, very short, much wider than long, frons rounded, vertex sulcate transversally, immarginate; eyes prominent, curved backwards, projecting over anterior angles of pronotum; antenna mutilate on type; rostrum long, reaching about the fourt abdominal segment.

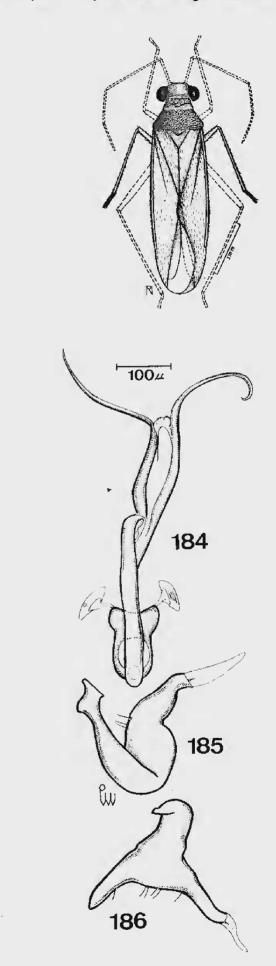
Pronotum distinctly punctate, calli prominent, reaching lateral margins, fused medially, with a pit between them, lateral margins concave, hind margin straight, humeral angles rounded; scutellum flat, depressed basally.

Hemelytra long, shortly pubescent, embolium thickened throughout, narrow, cuneus long and broad, areola of membrane elongate, nervure thick, pilose.

Legs long and slender, ostiolar peritreme oblique, narrow, segment I of rostrum reaching apex of first coxae.

Type species of genus: Stenopterocorisca viridis n.sp.

This genus has the fascies of *Stenopterocoris* China, 1944 but differs by the wider cuneus, less pedunculate eyes and by the much longer rostrum.



Stenopterocorisca viridis n.sp. — Fig. 183: male holotype; fig. 184: penis; fig. 185: left paramere; fig. 186: right paramere.

Stenopterocorisca viridis n.sp. (Figs. 183-186)

Characterized by the greenish color of body and by the structure of male genitalia.

Male: Length 4.2 mm, width 1.2 mm. Head: Length 0.2 mm, width 0.9 mm, vertex 0.44 mm. Antenna: Segments I-IV, broken. Pronotum: Length 0.7 mm, width at base 1.0 mm. Cuneus: Length 0.70 mm, width at base 0.40 mm.

General coloration light green; eyes black.

Rostrum reaching beyond the hind coxae (about the 4th abdominal segment); membrane translucent.

Genitalia: Penis (fig. 184) characteristic, with two flagellate lobes on both sides of the secondary gonopre. Left paramere (fig. 185) strongly curved, with a typical apex. Right paramere (fig. 186) branched apically.

Female: Unknown.

Holotype: male, NEW GUINEA: NE Ambunti, Sepik R., 200 m, 7.V.1963, R. Straatman, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratype: male, same data as type.

The two specimens at hand are with their antennae missing.

Taricoris n.gen.

Species with body wide, short, compact, shortly pubescent. Head wider than long, vertex depressed

posteriorly with a shallow transverse impressed line giving the impression of a collar behind it, eyes small, curved posteriorly, overlapping the antero-lateral angles of pronotum, frons rounded, smooth, slightly striate, jugum large, lorum small, clypeus moderate; rostrum thick, reaching apex of mesosternum; antenna short, the three first segments approximately subequal in length, segment I noticeably thicker, about as long as width of vertex, pubescence short.

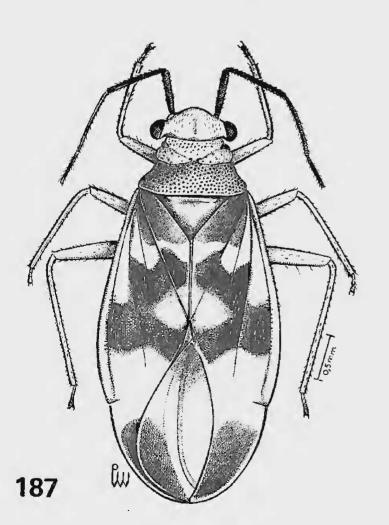
Pronotum distinctly punctate, except over calli which are tumid and reach lateral margins, hind margin of disc straight, anterior portion of coxal cleft I tuber-culate; scutellum flat, depressed at base.

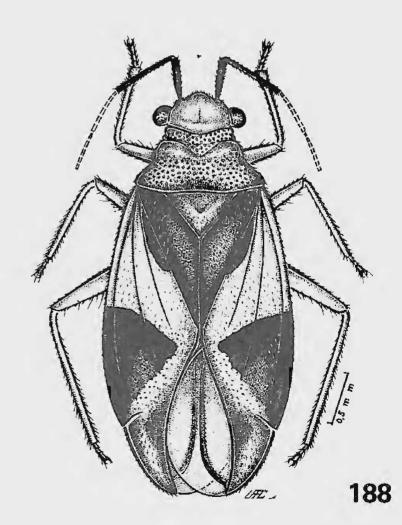
Hemelytra with very short pubescence, embolium widened apically, cuneus very long, broad, curved, reaching apex of membrane or nearly so, areola elongate, nervure thick, finely pubescent.

Legs short, tarsi and claws of the Bryocorini type. Type species of genus: *Taricoris wauensis* n.sp.

This genus is close to *Thaumastomiris* Kirkaldy, 1902 but differs by the much shorter rostrtum and by the narrowed cuneus.

Key to Species of Taricoris n.gen.





Taricoris gressitti n.sp. (Figs. 187-192)

Characterized by the color of the hemelytra by the very long and narrow cuneus and by the structure of the male genitalia.

Male: Length 4.6 mm, width 2.0 mm. Head: Length 0.3 mm, width 0.8 mm, vertex 0.56 mm. Antenna: Segment I, length 0.5 mm; II, 0.8 mm; III, 1.1 mm; IV, broken. Pronotum: Length 0.6 mm, width at base 1.2 mm. Cuneus: Length 0.40 mm, width at base 0.36 mm (holotype).

General coloration citrine to pale yellow with dark brown areas; head and pronotum citrine, eyes and antennae dark brown; scutellum orange to testaceous; hemelytra citrine with a characteristic black spot (which varies in shape according specimens — see figures 187, 188); membrane fuscous, two spots beyond apex of cuneus laterally darker. The hemelytra is citrine translucent at base and apex, including cuneus. Underside of body citrine, a longitudinal fascia running through

propleura laterally including anterior coxal cleft and lorum reddish, sides of mesosternum and base of abdomen laterally orange color, abdomen dark brown, legs pale, tarsi black.

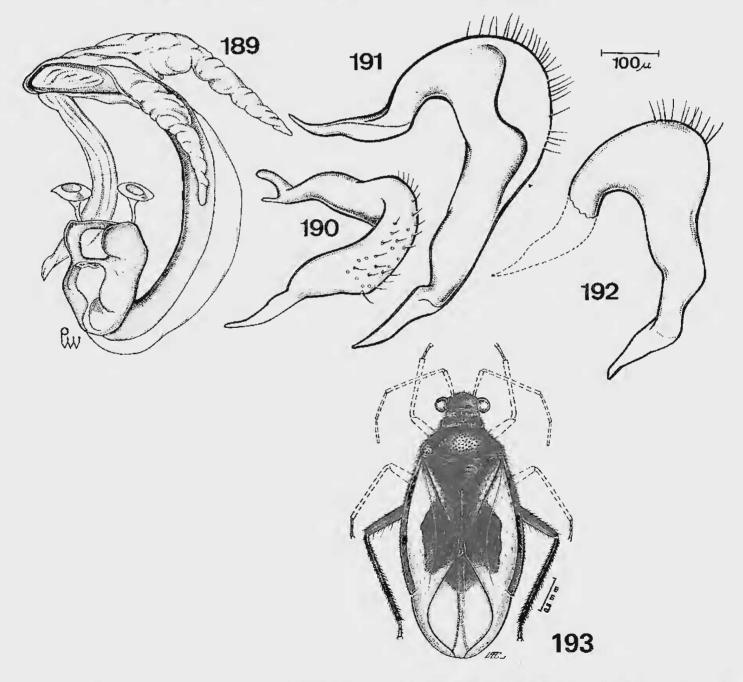
Cuneus very long, narrow, curved, reaching apex of membrane or nearly so, cuneal fracture obsolete, coxal cleft visible from above, eye small, somewhat pedunculate, rostrum reaching apex of mesosternum.

Genitalia: Penis (fig. 189) with membranous lobes following secondary gonopore. Left paramere (fig. 190) curved, with apex characteristic. Right paramere (fig. 191-192) enlarged sub-basally.

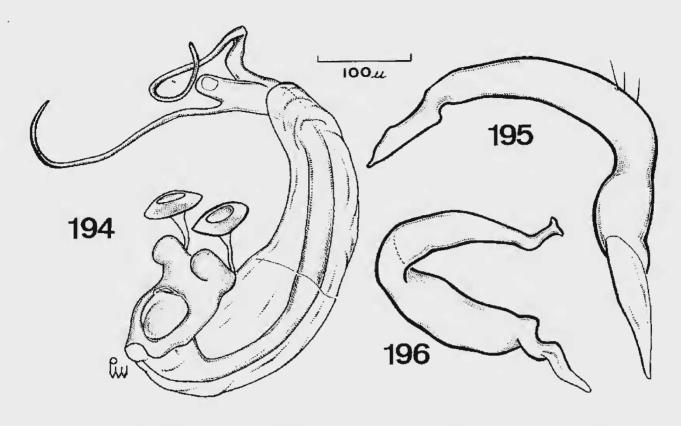
Female: Unknown.

Holotype: male, NEW GUINEA: SE above Tigobi near Tari, 1700 m, 1.VI.1966, J. L. Gressitt, in the Collection of the Bernice P. Bishop Museum, Honolulu. Paratype: male, NE Daulo Pass, 2500 m (Azaro-Chimbu div.), June 12, 1955, J. L. Gressitt.

Differs from *Taricoris wauensis* n.sp. by the wider cuneus, by the color of the hemelytra and by the structure of the male genitalia.



Taricoris gressitti n.sp. – Fig. 189: penis; fig. 190: left paramere; fig. 191-192: right paramere. Taricoris wauensis n.sp. – Fig. 193: male, holotype.



Taricoris wauensis n.sp. - Fig. 194: penis; fig. 195: left paramere; fig. 196: right paramere.

Taricoris wauensis n.sp. (Figs. 193-196)

Characterized by the color of the hemelytra and by the long and narrow cuneus.

Male: Length 3.7 mm, width 1.6 mm. Head: Length 0.2 mm, width 0.8 mm, vertex 0.40 mm. Antenna: Segments brokwn. Pronotum: Length 0.7 mm, width at base 1.2 mm. Cuneus: Length 1.16 mm, width at base 0.28 mm (holotype).

General coloration dark brown with pale yellow translucent areas; head, pronotum (except collar laterally), scutellum, clavus, a quadrate spot on hemelytra with anterior margin level with apical third of clavus, posterior margin level with apex of corial commissure and outer margin reaching middle of corium externally, embolium, cuneus and nervure of membrane dark brown, the latter fuscous; base, outer portion and apex of corium pale yellow translucent. Underside of body dark brown, second segment and connexivum of abdomen whitish, legs dark brown, femora at base and tarsi pale yellow.

Cuneus very long, narrow, curved, reaching apex of membrane, nervure straight (the two nervures parallel, diverging apically).

Genitalia: Penis (fig. 194) with two flagellate vesical appendages on both sides of secondary gonopore. Left paramere (fig. 195) curved, with a characteristic apex. Right paramere (fig. 196) falciform, as seen in figure.

. *Female:* Unknown.

Holotype: male, NEW GUINEA: NE Wau, Big Wau Ck. 1200 m, 1X.1965, P. Shanahan, in the Collection of the Bernice P. Bishop Museum, Honolulu.

Differs from *Taricoris gressitti* n.sp. by the color of the hemelytra and by the structure of the male genitalia.

Thaumastomiris Kirkaldy, 1902

Thaumastomiris Kirkaldy, Jour. Bombay Nat. Hist. Soc. 14:57; id. Distant, Faun. Brit. Ind. Rhync. 2: 473, 1904; id. Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):11, 1912; id. Carvalho, Arq. Mus. Nac. R. Jan. 44: 131, 1957.

Species with body oval, densely pilose. Head wider than long, frons rounded, vertex smooth, immarginate, with a posterior intumescence; eyes contiguous to pronotum, small; antenna with segment I about as long as width of vertex, segment II twice as long as first, segments III-IV slender, pubescence dense and short; rostrum reaching hind coxae.

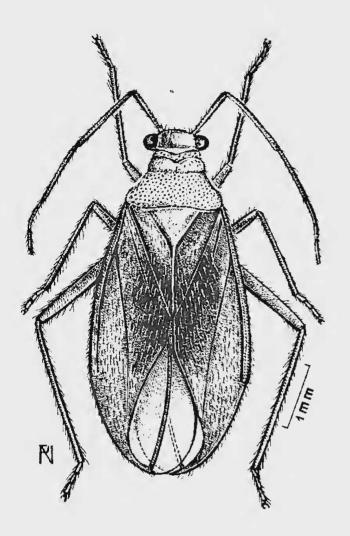
Pronotum distinctly punctured, narrowed anteriorly, calli large and fused at middle, collar-like area well marked, convex, hind margin of disc slightly convex, humeral angles rounded, lateral margins somewhat sinuate behind calli; mesoscutum covered, scutellum flat.

Hemelytra with distinct embolium and a characteristic cuneus, wide at base and noticeably narrowed towards apex, reaching distal end of membrane, areola large, nervures diverging apically.

Legs of moderate size, densely pubescent.

Type species of genus: *Thaumastomiris sanguinalis* Kirkaldy, 1902.

Differs from *Taricoris* n.gen. by the longer rostrum, wider cuneus and more compact body. The genus has also the general fascies of *Neella* Reuter, 1909 and *Neoneella* Costa Lima, 1942. The species feed on *Pandanus* and are restricted to the Pacific area. They can be easily recognized by the very broad, curved cuneus and by the reddish color (of most species).



Thaumastomiris discoidalis Poppius, 1912 (Figs. 197-200)

Thaumastomiris discoidalis Poppius, Ofv. F. Vet. Soc. Forh. 54 A (30):13; id. Carvalho, Arq. Mus. Nac. R. Jan. 44:131, 1957.

Characterized by its coloration and by the structure of male genitalia.

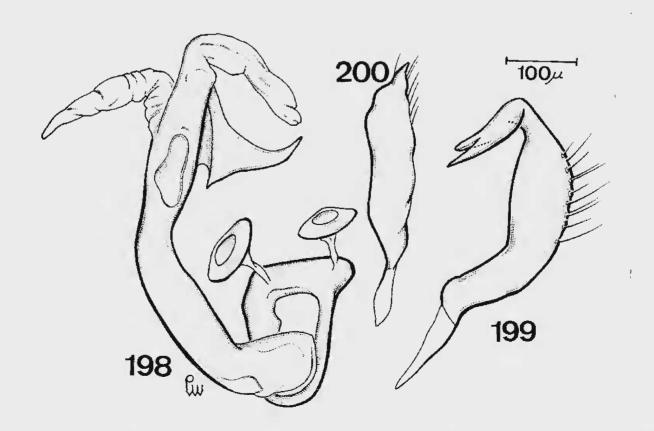
Male: Length 5.3 mm, widht 2.6 mm. Head: Length 0.3 mm, width 1.0 mm, vertex 0.56 mm. Antenna: Segment I, length 0.6 mm; II, 1.2 mm; III, 1.0 mm; IV, 0.6 mm. Pronotum: Length 1.0 mm, width at base 1.5 mm. Cuneus: Length 1.80 mm, width at base 0.96 mm.

General coloration red to reddish lutescent; head lutescent, eyes brown, segments II-IV of antenna brown to dark fuscous; hemelytra with clavus (except base), endocorium and corial commissure brown, membrane and nervure fuscous, exocorium, embolium and cuneus bright red. Underside of body reddish, abdomen brown, tarsi fuscous.

Antenna, outer margin of embolium and hind legs noticeably pilose; nervure of membrane with sparse hairs; rostrum reaching hind coxae.

Genitalia: Penis (fig. 198) with a typical theca, as seen in figure. Left paramere (fig. 199) strongly curved and branched apically. Right paramere (fig. 200) elongate, pointed apically.

Female: Length 5.0 mm, width 2.8 mm. Head: Length 0.3 mm, width 1.1 mm, vertex 0.60 mm. Antenna: Segment I, length 0.7 mm; II, 1.1 mm; III, 0.8 mm; IV, 0.6 mm. Pronotum: Length 1.0 mm, width at base 1.6 mm. Cuneus: Length 1.40 mm, width at base 0.88 mm (lectotype). Similar to male in general aspect and coloration.



Thaumastomiris discoidalis Poppius — Fig. 197: male, compared with type; fig. 198: penis; fig. 199: left paramere; fig. 200: right paramere.

Host plant: Pandanus spp.

Geographical distribution: Papua New Guinea.

7

Specimens studied: female, lectotype (new designation), New Guinea, Biró, 96, Lemien, Berlinhafen, Mus. Zool. Helsingfors, Spec. Typ. nº 9813, Thaumastomiris discoidalis Poppius NEW GUINEA: male and three females, Neth. River Tor (mouth), 4 km E Hollandia Maffen, VII.3.1959, T. C. Maa.

Differs from other species of the genus by the coloration of body and by the structure of the male genitalia.

SUMMARY

This paper deals with the Bryocorinae (Hemiptera, Miridae) from PAPUA NEW GUINEA based on collections assembled by the Bernice P. Bishop Museum, Honolulu, Hawaii.

On page 35 and 36 there is a list including 3 tribes, 24 genera and 54 species from the territory of Papua New Guinea and neighbouring Islands of which there are 9 new genera and 36 new species. All species are illustrated and when males were present their genitalia were also figured. Keys for tribes, genera and species are provided.

RESUMO

Este trabalho refere-se a um estudo sobre a sub-família Bryocorinae (Hemiptera, Miridae) de Papua Nova Guiné, com base numa coleção enviada para pesquisa pelo Museu Bernice P. Bishop, Honolulu. Hawaii.

Nas páginas 35 e 36 é apresentada uma lista que inclui 3 tribos, 24 gêneros e 54 espécies dessa sub-família que ocorrem em Papua Nova Guiné e ilhas vizinhas, das quais 9 gêneros e 36 espécies são novos para a ciência. Todas as espécies são descritas e ilustradas no trabalho, inclusive a genitália dos machos. Chaves sistemáticas para identificação das tribos, gêneros e espécies foram incluídas. Os tipos acham-se depositados no Museu B. P. Bishop, Honolulu e parátipos poderão ser encontrados na coleção do autor.

BIBLIOGRAPHICAL REFERENCES

- ATKINSON, E. T., 1890 Notes on Indian Economic Entomology. *Ind. Econ. Ent.* 1(4):175-190, figs.
- BAERENSPRUNG, V., 1860 Catalogus Hemipterorum Europae. *Rep. Berl. Ent. Berlin Zeit.* 4:1-25
- BERGROTH, E., 1922 List of the Ethiopian Bryocorinae (Hemiptera: Miridae) with notes and descriptions. *Rev. Zool. Bot. Afr.*, 10(1):51-61.
- CARVALHO, J. C. M., 1948 Mirídeos Neotropicais: XXXIV: Descrição de uma espécie nova de "Falconia" Distant e algumas correlações sinonímicas (Hemiptera). Rev. Brasil. Biol. 8(2):191.
- CARVALHO, J. C. M., 1952 On the Major Classification of the Miridae (Hemiptera) with Keys to Subfamilies and Tribes and a Catalogue of World Genera. *An. Acad. Brasil. Ci.* 24(1):31-110, 48 figs.
- CARVALHO, J. C. M., 1955 Keys to the Genera of Miridae of the World. Bol. Mus. Goeldi, 11(2):29-43.

- CARVALHO, J. C. M., 1956 Insects of Micronesia Heteropetera: Miridae. 7(1), 100 p., figs., Bernice P. Bishop Mus. Honolulu.
- CARVALHO, J. C. M., 1957 Catalogue of the Miridae of the World. Part I. Subfamilies Cylapinae, Deraeocorinae and Bryocorinae. *Arq. Mus. Nac. R. Jan. 44*: 89-158.
- CHINA, W. E., 1944 New and little known West African Miridae (Capsidae), Hemiptera, Heteroptera. *Bull. Ent. Res.* 35(2):171-191, 14 figs.
- CHINA, W. E. & CARVALHO, J. C. M., 1951 Four New Species representing two new genera of Bryocorinae associated with cacao in New Britain (Hemiptera: Miridae). *Bull. Ent. Res.*, 42(2):65-471, figs.
- COSTA, A., 1865 Generi e specie d'Insetti della fauna italiana. *Ann. Mus. Zool. Nap.* 2:147, pl. 2, fig. 6.
- COSTA-LIMA, A. M., 1942 Percevejos de Orquídeas (Hem. Miridae, Bryocorinae). *Orquídea*, Rio de Janeiro, 4(3):100-109, 14 figs.
- DAHLBOM, A. G., 1851 Anteckningar ofver Inseckter, som vlifvit observerade på Gottland och i en del af Calmare San, under Sommaren 1850. K. Sv. Akad. Handl. (1850):155-229,
- DISTANT, W. L., 1880-1893 Biologia Centrali Americana. Insecta. Rhynchota. Hemiptera-Heteroptera. I (1880-1884), 302 p.; Supplement (1884-1893):304-462, 39 pls. London.
- DISTANT, W. L., 1904 The Fauna of the British India, including Ceylon and Burma. Rhynchota. 2 (Heteroptera):412-488. Taylor & Francis, London.
- DISTANT, W. L., 1904 Rhynchotal Notes XX Heteroptera, fam. Capsidae (Part I). Ann. Mag. Nat. Hist. 7(13):103-114.
- DISTANT, W. L., 1909 Descriptions of Oriental Capsidae. Ann. Mag. Nat. Hist. 8(4):440-454.
- DISTANT, W. L., 1911 Rhynchota Indica (Heteroptera). *Entom.* 44:309-312.
- DISTANT, W. L., 1913 Reports of the Percy Sladen Trust Expedition to the Indian Ocean in 1905. IX. Rhynchota: Part I: Suborder Heteroptera. *Trans. Linn. Soc. Lond.*, 16:139-190, 3 pls.
- DOUGLAS, J. W. & SCOTT, J. 1865 The British Hemiptera, 1. Hemiptera-Heteroptera. 627 p., 21 pls. London.
- FALLEN, C. F., 1929, Hemiptera Suecia (Hemelytrata). Lundae, 188 p.
- FIEBER, F. X., 1860-1861. *Die europaischen Hemipte*ren. Halflugen (*Rhynchota Heteroptera*). 2 pts. 444 p. Carls Gerold's Sohn, Wien.
- GHAURI, M. S. K., 1975 Anomalous Miridae (Heteroptera) from Austrahasia. J. Nat. Hist., 9:611-618, 19 figs.
- GHESQUIÈRE, J., 1922 Notice monographique sur les *Helopeltis* Sign. (Miridae) ethiopiens. *Rev. Zool. Bot. Afr., 10*(3):281-300.
- HAGLUND, C. J. E., 1895 Beitrage zur Kenntnias der Insektenfauna von Kamerun 4, Ofv. K. Sv. Akad. Forh. 52(7):445-479.
- HERRICH-SCHAEFFER, G. A. W., 1850 Die Wanzenartigen Insecten. III:33-IX,1836-1853, Nurnberg.
- KIRKALDY, G. W., 1902 Memoir on Oriental Rhynchota. *Jour. Bombay Nat. Hist. Soc., 14*:47-58; 295-309, pls. A & C.

- KIRKALDY, G. W., 1902 Memoir upon the Rhynchotal family Capsidae Auctt. *Trans. Ent. Soc. Lond.*, 1902(2):243-272, 2 pls.
- MANN, H. H., 1907 Individual and seasonal variations in *Helopeltis theivora* Waterhouse, with description of a new species of *Helopeltis. Mem. Dept. Agric. Pusa Ent.* 1(4):275-337, figs.
- MILLER, N. C. E., 1954 Two New Species of Miridae (Hemiptera: Heteroptera). *Bull. Ent. Res.*, 45(4): 703-705, figs.
- MILLER, N. C. E., 1957 Two New Species of *Pseudo-doniella* China & Carvalho (Hemiptera: Miridae). *Bull. Ent. Res.* 48(4):57-58, figs.
- MOTHSCHULSKY, V., 1863 Essai d'un catalogue des Insectes de l'Ile Ceylon. *Bull. Soc. Nat. Mosc. 37*(3): 82-88.
- ODHIAMBO, T. T., 1962 Review of some genera of the subfamily Bryocorinae (Hemiptera, Miridae). Bull. Brit. Mus. (Nat. Hist.) Ent. 11(6):247-331.
- ODHIAMBO, T. R., 1965 A new interpretation of Westwood's genus *Eucerocoris* (Hemiptera, Miridae). *Proc. R. Ent. Soc. London (B). 34*(1-2):20-22, 2 figs.
- POPPIUS, B., 1911 Beiträge zur Kenntniss der Miriden-Fauna von Ceylon. Ofv. F. Vet. Soc. Forh., 53 A (2):1-36.
- POPPIUS, B., 1912 Die Miriden der Athiopischen Region. Mirina, Cylapina, Bryocorina. *Acta Soc. Sci. Fenn.* 41(3):1-203, figs.
- POPPIUS, B., 1912 H. Sauter's Formosa-Ausbeute: Miridae (Hemiptera) *Ent. Mitteilungen*, 1(10):302-304.
- POPPIUS, B., 1912 Zur Kenntnis der indo-australischen Bryocorinen. *Ofv. F. Vet. Soc. Forh., 54* A (30):1-27.
- POPPIUS, B., 1913 Zur Kenntnis der Miriden, Isometopiden, Anthocoriden, Nabiden und Schizopteriden Ceylon's. *Ent. Tidskr.*, 34(2-4):239-260.
- POPPIUS, B., 1914 Zur Kenntnis der Miriden, Anthcoriden und Nabiden Javas und Sumatra. *Tijdschr. V. Ent. (Suppl.)*, 56:100-183.
- POPPIUS, B., 1915 Neue Orientalischen Bryocorinen. *Philip. Jour. Sci., 10*(1):75-88.
- POPPIUS, B., 1915 Sauter's Formosa-Ausbeute: Nabidae, Anthocoridae, Termatophylidae, Miridae, Isometopidae und Ceratocombidae (Hemiptera). Arch. f. Naturq., 80 A (8):1-80 (1914).
- REUTER, O. M., 1875 Revisio critica Capsinarum praecipue Scandinaviae et Fenniae. Akad. Handl. Helsingfors. 89, 190 p.
- REUTER, O. M., 1892 Voyage de M. F. Simon au

- Venezuela (Hémiptères 1er parție, Capsides). Ann. Soc. Ent. Fr., 61:392-402.
- REUTER, O. M., 1903 Capsidae Chinenses et Thibetanae hactenus cognitae enumeratae novaeque species descriptae. Ofv. F. Vet. Soc. Forh. 45(6):1-23, 1 pl.
- REUTER, O. M., 1904 Ad cognitionen Capsidarum Australiae. Ofv. F. Vet. Soc. Forh. 47(5):1-16, figs.
- REUTER, O. M., 1910 Neue Beiträge zur Phylogenie und Systematik der Miriden nebst einleitenden Bemerkungen über die Phylogenie des Heteropteren-Familien. Acta Soc. Sci. Fenn., 37(3):167 p.
- Familien. Acta Soc. Sci. Fenn., 37(3):167 p.

 REUTER, O. M., 1913 Über Sixeonotus luteiceps
 Reuter und Beschreibung einer neuen Bryocorine.

 Ann. Ent. Soc. Belg. 57:278-279.
- SCHMITZ, G., 1968 Monographie des espèces africaines du genre *Helopeltis* Signoret (Heteroptera, Miridae). *Ann. Mus. Royal. Afr. Centrale*, 168, 245 p., 81 figs.
- SCHUMACHER, F., 1917 Neue athiopische Bryocorinen (Hemiptera, Heteroptera, Miridae). S. B. Ges. Naturf. Fr. Berlin 7:447-454.
- SCHUMACHER, F., 1919 Einige schädliche Hemipteren von der Insel Java. Zeit. Wiss. Insbiol., Berlin, 149:221-224.
- SIGNORET, V., 1858 Note sur les Hémiptères de la familie des Unicellules. *Ann. Soc. Ent. Fr.*, (3) 6: -499-502.
- STÄL, C., 1860 Bidrag rill Rio de Janeiro traktens Hemipter-fauna. *Ofv. Sv. Kongl. Vet. Ak. Handl. 2* (7):45-59.
- STÄL, C., 1870 Hemiptera insularum Philippinarum. Bidrag till Philippinska öarnes Hemipter-fauna. *Ofv. Sv. K. Vet. Akað. Forh. 27*:607-776.
- USINGER, R. L., 1946 Hemiptera-Heteroptera of Guam (in Insects of Guam, II). *Bull. B. P. Bishop Mus. 189*:58-91, 11 figs.
- WAGNER, E., 1943-1945 Die Wanzen Mitteleuropas. Hemiptera Heteroptera Mitteleuropas. in Gulde, J., Frankfurt a.M.1943 9 Teil, Miridae:1-160, 42 pls, figs.; 10 Teil:161-320, 1945.
- WALKER, F., 1867-1873 Catalogue of the specimens of Hemiptera Heteroptera in the collection of the British Museum. London, 8 parts.
- WATERHOUSE, G. O., 1886 Some observation on the tea-bugs (*Helopeltis*) on India and Java. *Trans. Ent. Soc. Lond.* 4:457-459, 3 figs.
- WOODWARD, T. E., 1954 New records and descriptions of Hemiptera-Heteroptera from the Three Kings Islands. *Rec. Auk. Inst. Mus.* 4(4):215-233.